Civil Services (Pre) Examination
General Study
Solved Question Paper
Exercise with Explanations

Medieval India

1. During the time of which Mughal Emperor did the English East India Company establish its first factory in India?
   (a) Akbar  (b) Jahangir  (c) Shah Jahan  (d) Aurangzeb
   Ans. (b)

Explanation
An English East India Company to trade with the East was formed in 1600. But because the Dutch were well entrenched in South-East Asia, the English turned to Indian trade particularly textiles.
Jahangir (1605-1627) was a son of Akbar, came to the throne after Akbar's death in 1605 AD. He is known for his strict administration of justice. In 1609, Captain William Hawkins, a representative of the East India Company came to Jahangir's Court. In 1615 Sir Thomas Roe, an ambassador of King James of England also came to his Court. Though initially Jahangir resisted, he later on granted permission to the English to establish a trading post at Surat. The English also established factories at Madras, Masulipatnam and Calcutta.
Source: Medieval India, Part II—H. C. Varma

2. Who was the Viceroy of India when the Rowlatt Act was passed?
   (a) Lord Irwin  (b) Lord Reading  (c) Lord Chelmsford  (d) Lord Wavell
   Ans. (c)

Explanation
During the viceroyalty of Lord Chelmsford, a sedition committee was appointed by the government in 1918, with justice Rowlatt which made certain recommendations to curb seditious activities in India. The Rowlatt Act, 1919, gave unbridled power to the government to arrest and imprison suspects without trial. The act caused a wave of anger among all sections of the people. Even before the act was passed, popular agitations had begun against it. Gandhi decided to fight against this act and he gave a call for Satyagraha on April 6, 1919. He was arrested on April 8, 1919. This led to further intensification of the agitation in Delhi, Ahmedabad and Punjab.
Source: Modern India—B. L. Grover

3. Which one of the following suggested the reconstitution of the Viceroy's Executive Council in which all the portfolios including that of War Members were to be held by the Indian leaders?
   (a) Simon Commission  (b) Simla Conference  (c) Cripps Proposal  (d) Cabinet Mission
   Ans. (b)

Explanation
The plan suggested the reconstitution of the Viceroy's Executive Council. Different Communities were to get their due share in the council and party was reserved for east-Hindus and Muslims. To discuss these proposals with the leadership of major Indian parties, a conference was called in Simla. The conference broke down on the issue of reconstitution of the Viceroy's Executive Council. Jinnah demanded that all Muslim members should belong to the league and in the executive council so formed, the Muslim members should have a veto on all important decisions. Such a demand was totally unacceptable to the Congress. It claimed that since 1885, it had represented all India's irrespective of their religion. Even to Wavell, Jinnah's demand seemed unjust. Wavell insisted that one of the Muslim must represent Punjab, which was governed by the Unionist Party to loyal to the British. Jinnah's strength, however, was now such that the British Government could not agree to go ahead with the plan without his co-operation. Jinnah probably felt that if he accepted the interim arrangement, Pakistan would be shelved.
Source: Modern India—B. L. Grover

4. During the Indian Freedom Struggle, who of the following raised an army called 'Free Indian Legion'?
   (a) Lala Hardayal  (b) Rash Behari Bose  (c) Subhash Chandra Bose  (d) V. D. Savarkar
   Ans. (c)

Explanation
During the Indian Freedom struggle, the Free Indian Legion was established by Subhash Chandra Bose. In Singapore, in 1943, Subhash Chandra Bose formed the Azad Hind Fauj (Indian National Army) and gave his famous call 'Delhi Chalo' Rash Behari Bose, who had been living in exile in Japan since 1915 joined him. Subhash Chandra Bose popularly known as 'Netaji' was born on...
January 23, 1897, at Cuttack in Orissa, of respectable middle class Bengali Parents. He passed the Indian Civil Services Examination in 1920. He joined the Indian National Congress in 1921. In 1938 he was the president of the Indian National Congress at its Haripura session and in 1939 he was elected president of its Tripuri session. He died in a plane crash on August 18, 1945.

Source: Freedom Struggle in India—Bipin Chandra

> 5. Who among the following rejected the title of ‘Knighthood’ and refused to accept a position in the Council of the Secretary of State for India?

(a) Motilal Nehru  
(b) M. G. Ranade  
(c) G. K. Gokhale  
(d) B. G. Tilak

Ans. (c)

Explanation

In 1905, Gopal Krishna Gokhale had established the Servants of India Society. He had also rejected the title of ‘Knighthood’ and refused to accept a position in the council of the Secretary of State for India. He was a prominent Indian nationalist. He presided over the 1905 session of the Indian National Congress. He became a member of the Bombay Legislative Council in 1902. His last public duty was to serve as a member of the Indian Public Service Commission (1912-15). He died in 1915.

Source: Modern India—B. L. Grover

> 6. Match List-I with List-II and select the correct answer using the codes given below the Lists:

<table>
<thead>
<tr>
<th>List-I (Author)</th>
<th>List-II (Work)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Bankimchandra</td>
<td>1. Shatranj Ke Khilari</td>
</tr>
<tr>
<td>B. Dinabandhu Mitra</td>
<td>2. Debi Chaudhuri</td>
</tr>
<tr>
<td>C. Prem Chand</td>
<td>3. Nil Darpan</td>
</tr>
<tr>
<td>D. Chandrakanta</td>
<td>4. Chandra Gobinda</td>
</tr>
</tbody>
</table>

Codes:

<table>
<thead>
<tr>
<th>(a)</th>
<th>(b)</th>
<th>(c)</th>
<th>(d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

Ans. (c)

Explanation

Following is the correct matching of above question

<table>
<thead>
<tr>
<th>List-I (Author)</th>
<th>List-II (Work)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Bankimchandra</td>
<td>2. Debi Chaudhuri</td>
</tr>
<tr>
<td>B. Dinabandhu Mitra</td>
<td>3. Nil Darpan</td>
</tr>
<tr>
<td>C. Prem Chand</td>
<td>1. Shatranj Ke Khilari</td>
</tr>
</tbody>
</table>

Bankim Chandra Chatterjee was a Bengali Novelist of the 19th century, whose ‘Anand Math’ consists of national song of India ‘Vande Mataram’. Prem Chand (Dhanpat Rai) was a renowned Hindi and Urdu writer of modern India. His famous literary works are Godan, Gaban, Rangbhumi, Karambhum, Premashram etc.

> 7. Who among the following gave a systematic critique of the moderate politics of the Indian National Congress in a series of articles entitled ‘New Lamps for Old’?

(a) Aurobindo Ghosh  
(b) R.C. Dutt  
(c) Syed Ahmad Khan  
(d) Viraraghavachari

Ans. (a)

Explanation

Aurobindo Ghosh gave a systematic critique of the moderate politics of the Indian National Congress in a series of articles entitled ‘New Lamps for Old.’ Aurobindo Ghosh (1872-1950) was an ardent nationalist who later became a saint, was educated in England. His views were readily accepted by Lala Lajpat Rai of Punjab and Bal Gangadhar Tilak of Maharashtra and led to the formation within the ambit of Congress, on an extremist school. He propagated his ideas through journals like the Bande Mataram and Karmayogin. He passed away in 1950.

Source: Modern India—B. L. Grover

> 8. Who among the following used the phrase ‘Un-British’ to criticize the English colonial control of India?

(a) Anandmohan Bose  
(b) Badruddin Tyabji  
(c) Dadabhai Naraji  
(d) Phirozeshah Mehta

Ans. (c)

Explanation

Dadabhai Naraji (1825-1917) was a prominent businessman of Bombay with trading connections with England. He was elected president of Indian National Congress at its second session held in Calcutta in 1886. He was the first Indian to be elected a member of the House of Commons in England on a ticket of Liberal Party. Twice again in 1893 and in 1906, he was elected president of INC. Dadabhai Naraji made poverty his special subject and attributed it to the deliberate British policies, particularly to the drain of wealth through an artificially created export surplus. He died in 1917. He is known as the “Grand Old Man of India.”

Source: Modern India—B. L. Grover

> 9. Who among the following wrote the poem, Subh-e Azadi ?

(a) Sahir Ludhiyani  
(b) Faiz Ahmed Faiz  
(c) Muhammad Iqbal  
(d) Maulana Abul Kalam Azad

Ans. (b)

Explanation

The poem, Subh-e-Azadi has been written by Faiz Ahmed Faiz. He is a Pakistani Urdu poet.

Source: Manorama years book—2007

> 10. Assertion (A): The Congress Ministries in all the provinces resigned in the year 1939.  
Reason (R): The Congress did not accept the decision of the Viceroy to declare war against Germany in the context of the Second World War.

(A) :

The Congress Ministries in all the provinces resigned in the year 1939.

(R) :

The Congress did not accept the decision of the Viceroy to declare war against Germany in the context of the Second World War.
Codes:
(a) A and R are individually true and R is the correct explanation of A.
(b) A and R are individual true, but R is not the correct explanation of A
(c) A is true, but R is false
(d) A is false, but R is true
Ans. (a)

Explanation
Indian Viceroy Lord Linlithgo declared India against Germany in Second World War on dated 17 October, 1939. The Indian National Congress Working Committee on 23 October, 1939, decided not to support the War and asked the Congress ministers to resign, even though the Congress was against any hasty action, like an immediate anti imperialist struggle. So the Congress ministries in all the provinces resigned in the year 1939 because the Congress did not accept the decision of the Viceroy to declare war against Germany in the context of the Second World War. So Assertion (A) and Reason (R), both individually true and R is the correct explanation of A. So the Answer is option (a).

Source: Freedom Struggle in India—Bipin Chandra

11. Where was the First Session of the Indian National Congress held in December, 1885?
(a) Ahmedabad  
(b) Bombay
(c) Calcutta  
(d) Delhi
Ans. (b)

Explanation
In December, 1885, the Indian National Congress was established by A. O. Hume, an ex-ICS officer, dominated the INC till 1892 as its General Secretary. The INC met for the first time on December 28, 1885 in the hall of the Gokaldas Tejpal Sanskrit College, Bombay. Womesh Chandra Bannerji, an eminent Bengali lawyer, was elected its first president. It was attended by 72 delegates. The objective of the INC were declared to be the development of close relations between national workers, the dissolution of all race, creed and provincial prejudice, and consolidation of national unity among them, recording of the conclusions on vital Indian problems reached by educated Indians after earnest discussion and outlining the programme of work for the next year.

Source: Modern India—B. L. Grover

12. Yom Kippur War was fought between which sides/countries?
(a) Turkey and Greece  
(b) Serbs and Croats
(c) Israel, and Arab countries led by Egypt and Syria
(d) Iran and Iraq
Ans. (c)

Explanation
Yom Kippur War also known as the 1973 Arab-Israeli War and the fourth Arab-Israeli War was fought from October 6 to 26, 1973 by a coalition of Arab states led by Egypt and Syria against Israel. The War began with a surprise joint attack by Egypt and Syria on the Jewish holiday of Yom Kippur. Egypt and Syria crossed the cease fire lines in the Sinai and Golan Heights, respectively, which had been captured by Israel in 1967 during the six day war.

Source: Geography of India—D. R. Khullar

13. Which of the following pairs are correctly matched?
<table>
<thead>
<tr>
<th>Irrigation Project</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Damanganga</td>
<td>Gujarat</td>
</tr>
<tr>
<td>Girna</td>
<td>Maharashtra</td>
</tr>
<tr>
<td>Pamba</td>
<td>Kerala</td>
</tr>
</tbody>
</table>

Codes:
(a) 1 and 2  
(b) 2 and 3
(c) 1 and 3  
(d) 1, 2 and 3
Ans. (d)

Explanation
The following pairs are correctly matched:
<table>
<thead>
<tr>
<th>Irrigation Project</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Damanganga</td>
<td>Gujarat (Situated in South</td>
</tr>
<tr>
<td>Girna</td>
<td>Maharashtra (Jaigaon Dist of</td>
</tr>
<tr>
<td>Pamba</td>
<td>Kerala (Pathanabaghitata</td>
</tr>
<tr>
<td></td>
<td>District of Kerala)</td>
</tr>
</tbody>
</table>

Source: Geography of India—D. R. Khullar

14. Which of the following pairs in respect of current power generation in India is/are correctly matched?

<table>
<thead>
<tr>
<th>Power Generation</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installed capacity</td>
<td>10,00,000 MW</td>
</tr>
<tr>
<td>Electricity generation</td>
<td>660 billion kWh</td>
</tr>
</tbody>
</table>

Codes:
(a) 1 only  
(b) 2 only
(c) Both 1 and 2  
(d) Neither 1 nor 2
Ans. (b)

Explanation
Installed Capacity: Grand Total Installed Capacity is 132, 110.21 MW. The installed power generation capacity in the country has increased from 1,400 MW in 1947 to 124287.17 MW as on 31 March, 2006 comprising 82, 410.54 MW thermal, 32,325 MW hydro, 6190.86 R.E.S. and 3360 MW nuclear. A capacity addition programme of 19682 MW has been fixed for the year 2006-07.

Source: India 2008—Publication Division, Govt. of India

15. With which one of the following is BRIT (Government of India) engaged?
(a) Railway Wagons  
(b) Information Technology
(c) Isotope Technology  
(d) Road Transport
Ans. (c)
16. Which of the following are among the million-plus cities in India on the basis of data of the Census, 2001?

(a) Ludhiana
(b) Kochi
(c) Surat
(d) Nagpur

Select the correct answer using the codes given below:

Codes:
(a) 1, 2 and 3  (b) 2, 3 and 4  (c) 1 and 4  (d) 1, 2, 3 and 4

Ans. (d)

17. Amongst the following States, which one has the highest percentage of rural population to its total population (on the basis of the Census, 2001)?

(a) Himachal Pradesh
(b) Bihar
(c) Orissa
(d) Uttar Pradesh

Ans. (a)

18. What is the approximate percentage of persons above 65 years of age in India’s current population?

(a) 4-15%  (b) 11-12%  (c) 8-9%  (d) 5-6%

Ans. (d)

19. Out of all the Biosphere Reserves in India, four have been recognized on the World Network by UNESCO. Which one of the following is not one of them?

(a) Gulf of Mannar
(b) Kanchenjunga
(c) Nanda Devi
(d) Sunderbans

Ans. (b)

20. Which of the following pairs are correctly matched?

Waterfalls | River
---|---
Kapilgadh Falls | Godavari
Jog Falls | Haravati
Sivasamudram Falls | Cauvery

Codes:
(a) 1 and 2  (b) 2 and 3  (c) 1 and 3  (d) 1, 2 and 3

Ans. (b)
22. Which of the following minerals are found in a natural way in the State of Chhattisgarh?

1. Bauxite
2. Dolomite
3. Iron ore
4. Tin

**Codes:**
(a) 1, 2 and 3
(b) 1 and 3
(c) 2 and 4
(d) 1, 2, 3 and 4

**Ans. (d)**

**Explanation:** In Chhattisgarh, Bauxite is found in Raipur, Sarguja, Bilaspur, Korba, Raigarh, Bastar, Rajnandgaon and Kawardha. Dolomite is found in Bilaspur, Durg, Raipur, Bastar, Raigarh and Jangal-Chamba. Iron ore is found in Sarguja, Kanker, Bastar, Dantewada and Durg. While Tin is found in Raipur. All the tin ore in India is in Chhattisgarh. The details of various available minerals are as follows:

<table>
<thead>
<tr>
<th>Name of minerals</th>
<th>Deposit state</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Bauxite</td>
<td>Chhattisgarh, Jharkhand, Goa, Gujarat, Orissa, Chhattisgarh</td>
</tr>
<tr>
<td>(ii) Dolomite</td>
<td>Orissa, Chhattisgarh, Gujarat, Jharkhand, Uttar Pradesh and West Bengal</td>
</tr>
<tr>
<td>(iii) Iron Ore</td>
<td>Chhattisgarh, Jharkhand, Orissa, Karnataka, Maharashtra and Andhra Pradesh</td>
</tr>
<tr>
<td>(iv) Tin Ore</td>
<td>India is richer in tin ores. The chief deposits are found in Bihar, Jharkhand and Chhattisgarh.</td>
</tr>
<tr>
<td>(v) Coal</td>
<td>Jharkhand, West Bengal, Orissa, Madhya Pradesh, Andhra Pradesh, Maharashtra, etc.</td>
</tr>
</tbody>
</table>

**Source:** Resource Geography—NCERT

23. Consider the following statements:

1. Chikmagalur is well-known for sugar production.
2. Mandya is well-known as a coffee-producing region.

Which of the statements given above are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

**Ans. (b)**

**Explanation:** Chikmagalur (also known as Chikmagalur) is a town located in Chikmagalur district in the Indian State of Karnataka. This city is located in the foothills of Bababudangi range in the south for its coffee and tea estates. The Mysore Sugar Company Ltd. is located in the heart of Mandya city. It is one of the oldest sugar factories to be set up in Karnataka. It has a processing capacity of 5,000 tons of cane per day and was established in 1933-1934.

**Source:** Geography of India—D. R. Khullar

24. Where are Tapovan and Vishnughar hydroelectric projects located?

(a) Madhya Pradesh
(b) Uttar Pradesh
(c) Uttararakhand
(d) Rajasthan

**Ans. (c)**

**Explanation:** Tapovan and Vishnughar Hydroelectric projects located in Pithoragarh district of Uttarakhand state.

**Source:** Geography of India—C. B. Manoria

25. In India, how many States share the coastline?

(a) 7
(b) 8
(c) 9
(d) 10

**Ans. (c)**

**Explanation:** In India, nine States share the coastline. These states are Gujarat, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, Orissa, and West Bengal. In these coastal states, the total length of Gujarat coastal boundary is longest (1200 km). After this Andhra Pradesh coastal length is longest.

**Source:** Geography of India—D. R. Khullar, Oxford Student Atlas

26. Match List-I with List-II and select the correct answer using the codes given below the Lists:

**List-I**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Coffee Board</td>
<td>1. Bengaluru</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Rubber Board</td>
<td>2. Guntur</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Tea Board</td>
<td>3. Kottayam</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Tobacco Board</td>
<td>4. Kolkata</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**List-II**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>(b)</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>(c)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>(d)</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

**Codes:**

**Ans. (b)**

**Explanation:** The correct matching list are given below:

**Source:** India 2008—Publication Division, Govt. of India

27. Which one among the following has the maximum number of National Parks?

(a) Andaman and Nicobar Islands
(b) Arunachal Pradesh
(c) Assam
(d) Meghalaya

**Ans. (c)**

**Explanation:** Maximum numbers of National Park is at Assam. These are the following:

(i) Satapura (Tejpur), (ii) Manas (Barpet), (iii) Kaziranga (Jorhat), (iv) Garam Pani (Dibrui). While Arunachal Pradesh has two National Parks—(i) Namdapha (Tenyip), (ii) Pakokku (Kameng). Meghalaya and Andaman Nicobar do not have any National Park.

**Source:** Environment Geography—Majid Hussain
28. Rajiv Gandhi National Flying Institute is being established in which State?
   (a) Karnataka  (b) Maharashtra  (c) Kerala  (d) Orissa
   **Ans. (b)**

Explanation
Rajiv Gandhi National Flying Institute is being established at Gonda, Maharashtra with Rs. 112.50 crore.

Source: *India — 2008: Publication Division, Govt. of India*

28. With which one of the following rivers is the Omkareshwar project associated?
   (a) Chambal  (b) Narmada  (c) Tapi  (d) Bhima
   **Ans. (b)**

Explanation
The Omkareshwar project is one of 30 large dams to be build in the Narmada Valley, which are being contested by one of India's strongest grassroot movement. In spring 2004 MIGA, the World Bank's investment Guarantee Agency, turned down an application for Omkareshwar because of environmental and social concerns. Construction of the dam was taken up in November, 2003 in spite of the fact that no environment impact assessment and no resettlement plan has been prepared for the project.

Source: *Geography of India — D.R. Khullar*

30. ISRO successfully conducted a rocket test using cryogenic engines in the year 2007. Where is the test stand used for the purpose, located?
   (a) Balasore  (b) Thiruvananthapuram  (c) Mahendragiri  (d) Karwar
   **Ans. (c)**

Explanation
An endurance test for duration of more than 16 minutes on the indigenous cryogenic Engine for Geo-synchronous Satellite Launch Vehicle (GSLV) was successfully conducted on December 5, 2003 at ISRO's Liquid Propulsion Systems Centre at Mahendragiri in Tamil Nadu. The test involved the firing of the cryogenic main engine with 7.1 tonne thrust for 1000 seconds, simultaneously with two 200 kg thrust cryogenic steering engines, all mounted on a single block as used in the actual GSLV flight stage developing 7.5 tonne total thrust.

Source: *Chronicle Year Book-2008*

31. Which was the Capital of Andhra State when it was made a separate State in the year 1953?
   (a) Guntur  (b) Kurnool  (c) Nellore  (d) Warangal
   **Ans. (b)**

Explanation
The Andhra Pradesh was made a separate new state in 1953, taking 11 districts with its capital at kurnool on the Telugu Language Movement. In 1953, the government was forced to create a separate State of Andhra Pradesh for Telugu-speaking people following the long-drawn agitation and death of Potti Srinamulu after a hunger strike for 56 days. Thus the first linguistic State of Andhra Pradesh was created under pressure. In 1956, Hyderabad became the Capital of Andhra Pradesh.

Source: *Geography of India — D. R. Khullar*

32. In which one of the following States are Namchik-Namphuk Coal-fields located?
   (a) Arunachal Pradesh  (b) Meghalaya  (c) Manipur  (d) Mizoram
   **Ans. (a)**

Explanation
Namchik-Namphuk Coal-fields are located at Arunachal Pradesh and have been taken up by Arunachal Pradesh Mineral Development and Trading Corporation Limited, which was set up in 1991.

Source: *Geography of India—C. B. Mamoria*

33. Consider the following statements:
1. Salt-water crocodile is found in the Andaman and Nicobar Islands.
2. Shrew and tapir are found in the Western Ghats of the Malabar region.
Which of the statements given above is/are correct?
   (a) 1 only  (b) 2 only  (c) Both 1 and 2  (d) Neither 1 nor 2
   **Ans. (c)**

Explanation
The salt water crocodile is found along the eastern coast and in the Andaman and Nicobar Islands. A project for breeding crocodiles, started in 1974, has been instrumental in saving the crocodile from extinction. The great Himalayan range has a very interesting variety of fauna that includes the wild sheep and goats, markhor, ibex, shrew and tapir. The Panda and snow leopard are found in the upper reaches of the mainains. The Malabar region covers the excessively humid belt of mainatin country, fauna that includes the wild sheep and goats, markhor, ibex, shrew and tapir.

Source: *Environment Geography—Majid Hussain*

34. Consider the following pairs:

<table>
<thead>
<tr>
<th>Tributary River</th>
<th>Main River</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chambal</td>
<td>Narmada</td>
</tr>
<tr>
<td>Sone</td>
<td>Yamuna</td>
</tr>
<tr>
<td>Manas</td>
<td>Brahmaputra</td>
</tr>
</tbody>
</table>

Which of the pairs given above is/are correctly matched?
   (a) 1, 2 and 3  (b) 1 and 2  (c) 2 and 3  (d) 3 only
   **Ans. (d)**

Explanation
Chambal is the tributary of Yamuna and Sone is the tributary of Ganga. Hence (d) is correct, because in Tibet Manas is the tributary of Brahmaputra.

Source: *Oxford Student Atlas. Geography of India — C.B. Mamoria*

35. Which of the following hills are found where the Eastern Ghats and the Western Ghats meet?
   (a) Anamalai Hills  (b) Cardamom Hills  (c) Nilgiri Hills  (d) Shevaroy Hills
   **Ans. (c)**

Explanation
The Eastern Ghats and the Western Ghats meet at the Nilgiri Hills.
38. Among the following which one has the minimum population on the basis of data of Census of India, 2001?
(a) Chandigarh
(b) Mizoram
(c) Puducherry
(d) Sikkim
Ans. (d)

Explanation
Population on the basis of data of Census of India 2001 is as under:

<table>
<thead>
<tr>
<th>Name of State/Union Territory</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Chandigarh</td>
<td>900,635</td>
</tr>
<tr>
<td>(ii) Mizoram</td>
<td>888,573</td>
</tr>
<tr>
<td>(iii) Puducherry</td>
<td>974,345</td>
</tr>
<tr>
<td>(iv) Sikkim</td>
<td>540,851</td>
</tr>
</tbody>
</table>

Source: India 2008—Publication Division, Govt. of India

World’s Geography

39. Which two countries follow China and India in the decreasing order of their populations?
(a) Brazil and USA
(b) I USA and Indonesia
(c) Canada and Malaysia
(d) Russia and Nigeria
Ans. (b)

Explanation
USA (United State of America) and Indonesia are the two countries which followed China and India in the decreasing order of their populations.

World’s 10 most populous countries (2005)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>China</td>
<td>1,298,847,624</td>
</tr>
<tr>
<td>2.</td>
<td>India</td>
<td>1,065,070,607</td>
</tr>
<tr>
<td>3.</td>
<td>USA</td>
<td>293,027,571</td>
</tr>
<tr>
<td>4.</td>
<td>Indonesia</td>
<td>238,452,952</td>
</tr>
<tr>
<td>5.</td>
<td>Brazil</td>
<td>184,101,109</td>
</tr>
<tr>
<td>6.</td>
<td>Pakistan</td>
<td>159,196,336</td>
</tr>
<tr>
<td>7.</td>
<td>Russia</td>
<td>143,782,338</td>
</tr>
<tr>
<td>8.</td>
<td>Bangladesh</td>
<td>141,340,476</td>
</tr>
<tr>
<td>9.</td>
<td>Nigeria</td>
<td>137,253,133</td>
</tr>
<tr>
<td>10.</td>
<td>Japan</td>
<td>127,333,002</td>
</tr>
</tbody>
</table>

Source: Manorama Year Book-2008

40. Which one of the following straits is nearest to the International Date Line?
(a) Malacca Strait
(b) Bering Strait
(c) Strait of Florida
(d) Strait of Gibraltar
Ans. (b)

Explanation
A narrow strip of water connecting two large bodies of seawater is called strait. Example—Palk Strait. Bering strait is nearest to the International Date Line. Some important straits are given below:
> 41. Which one of the following cities is nearest to the equator?

(a) Colombo
(b) Jakarta
(c) Manila
(d) Singapore

**Ans. (d)**

**Explanation**
Singapore is nearest to the equator. The cities and their latitude are given below:

<table>
<thead>
<tr>
<th>Name of city</th>
<th>Latitude from equator</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Colombo (Sri Lanka)</td>
<td>6° 55' N</td>
</tr>
<tr>
<td>(ii) Manila (Philippines)</td>
<td>14° 37' N</td>
</tr>
<tr>
<td>(iii) Jakarta (Indonesia)</td>
<td>6° 8' S</td>
</tr>
<tr>
<td>(iv) Singapore (Singapore)</td>
<td>1° N</td>
</tr>
</tbody>
</table>

**Source:** Oxford Student Atlas

> 42. Which of the following countries share borders with Moldova?
1. Ukraine
2. Romania
3. Belarus

Select the correct answer using the codes given below:

<table>
<thead>
<tr>
<th>Codes:</th>
<th>(a) 1 and 2</th>
<th>(b) 2 and 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(c) 1 and 3</td>
<td>(d) 1, 2 and 3</td>
</tr>
</tbody>
</table>

**Ans. (a)**

**Explanation**
The Republic of Moldova is surrounded by Ukraine (North, East and South) and Romania (West). Moldovan Republic of Soviet Russia was renamed Moldova in 1990. In December, 1991, it became member of CIS. An agreement between Moldova and Russia in July, 1992 brought to an end the armed conflict and established a 'Security Zone'. In February, 2001 parliamentary election, the Communist Party won an overwhelming victory in parliament elections. Moldova's president approved the Ukraine's peace plan in June, 2005 for Trans-Driester region's autonomy. The capital of Moldova is Chisinau.

**Source:** Manorama Year Book-2007

> 43. Consider the following statements:

1. Ajman is one of the seven Emirates of the UAE.
2. Ras al-Khaimah was the last Sheikhdom to join the UAE.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

**Ans. (c)**

**Explanation**
Following is the seven Emirates of UAE—Abu Dhabi, Ajman, Dubai, Fujairah, Ras al-Khaimah, Sharjah, and Umm al-Qaiwain. Although Ras-al-Khaimah is the last sheikhdom to join the UAE, the United Arab Emirates (UAE) is a member of the United Arab Emirates, situated in the southeast of the Arab Peninsula is Southwestern Asia on the Persian Gulf, bordering Oman and the Arabian Sea.

**Source:** Manorama Year Book-2008

> 44. For India, China, the UK and the USA, which one of the following is the correct sequence of the median age of their populations?

(a) China < India < UK < USA
(b) India < China < USA < UK
(c) China < India < USA < UK
(d) India < China < UK < USA

**Ans. (b)**

**Explanation**
Median age of following countries are given below:

<table>
<thead>
<tr>
<th>Name of countries</th>
<th>Median age</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) India</td>
<td>23.8</td>
</tr>
<tr>
<td>(ii) China</td>
<td>32.5</td>
</tr>
<tr>
<td>(iii) United States of America</td>
<td>36.5</td>
</tr>
<tr>
<td>(iv) United Kingdom</td>
<td>38.9</td>
</tr>
</tbody>
</table>

Median age reflects the ageing of population. So, choice (b) is correct.

**Source:** Population Geography—Chandana

> 45. In which one of the following is Malta located?

(a) Baltic Sea
(b) Mediterranean Sea
(c) Black Sea
(d) North Sea

**Ans. (b)**

**Explanation**

**Source:** Manorama Year Book-2008

> 46. Consider the following statements:

1. The albedo of an object determines its visual brightness when viewed with reflected light.
2. The albedo of Mercury is much greater than the albedo of the Earth.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans. (c)

Explanation
Albedo, the fraction of the incident sunlight that is reflected. When an object most of the light that hits it, it looks bright and it has a high albedo. When an object absorbs most of the light that hits it, it looks dark. Dark objects have low albedos. The term albedo is commonly used to applied to the overall average reflection co-efficient of an object. For example, the albedo of the earth is 0.39 and this affects the equilibrium temperature of the earth. The green house effect, by trapping infra-red radiation, can lower the albedo of the earth and cause global warming.

The planetary albedos given by De Pater and Lissauer are summarized in the following table:

<table>
<thead>
<tr>
<th>Planet</th>
<th>Geometric Albedo</th>
<th>Bond Albedo</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Mercury</td>
<td>0.138</td>
<td>0.119</td>
</tr>
<tr>
<td>(ii) Venus</td>
<td>0.84</td>
<td>0.75</td>
</tr>
<tr>
<td>(iii) Earth</td>
<td>0.367</td>
<td>0.29</td>
</tr>
<tr>
<td>(iv) Moon</td>
<td>0.113</td>
<td>0.123</td>
</tr>
<tr>
<td>(v) Mars</td>
<td>0.15</td>
<td>0.16</td>
</tr>
<tr>
<td>(vi) Pluto</td>
<td>0.44-0.61</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Source: Physical Geography—Savindra Singh

47. Which one amongst the following has the largest livestock population in the world?
(a) Brazil  
(b) China  
(c) India  
(d) USA

Ans. (c)

Explanation
India has largest livestock population in the world, having 57% of World’s Buffalo population and 14% of the Cattle (Cow/Bulls) population. According to 17th India’s Livestock Census 2003, the country has about 183 crore cattle and 9.8 crore buffalo with a total livestock of 48.50 crore and total poultry of 48.90 crores.

Source: Population Geography—Chandana

48. Which of the following is/are included in the Directive Principles of State Policy?
1. Prohibition of traffic in human beings and forced labour.
2. Prohibition of consumption except for medicinal purposes of intoxicating drinks and of other drugs which are injurious to health.

Select the correct answer using the codes given below:
(a) 1 only  
(b) 2 only  
(c) Both 1 and 2  
(d) Neither 1 nor 2

Ans. (b)

Explanation
Part IV of the Constitution under Articles 36 to 51 enjoins upon the States, certain Directive Principles with the aim of ensuring a just and equitable socio-economic order. These are not justiciable.

Prohibition of traffic in human being and forced labour is mentioned in Article 23 in Indian Constitution. It is not a Directive Principle but a fundamental right.

Prohibition of consumption except for medicinal purposes of intoxicating drinks and of other drugs which are injurious to health is a Directive Principle.


49. Consider the following statements:
The Constitution of India provides that
1. the Legislative Assembly of each State shall consist of not more than 450 members chosen by direct election from territorial constituencies in the State.
2. a person shall not be qualified to be chosen to fill a seat in the Legislative Assembly of a State if he/she is less than 25 years of age.

Which of the statements given above is/are correct?
(a) 1 only  
(b) 2 only  
(c) Both 1 and 2  
(d) Neither 1 nor 2

Ans. (b)

Explanation
The Constitution of India provides that the Legislative Assembly of each State shall consist of not more than 500 members chosen by direct election from territorial constituencies in the State. So statement 1 is wrong. The State Legislative consists of the Governor and the House or Houses of the State. The Legislative Assembly is the popularly elected House of the State Legislature. Its minimum strength should be 60 and maximum should be 500, though the Legislative Assemblies of Sikkim, Mizoram etc have less than 60 members.

Article 173 of Indian Constitution mentioned about the Qualification for the membership of the State Legislature. A person can become a member of the Legislative Assembly only if he:
1. is a citizen of India.
2. if more than 25 years of age.
3. possesses such other qualifications as may be prescribed by or under the law enacted by the Parliament.


50. Under which one of the following Constitution Amendment Acts, four languages under the Eighth Schedule of the Constitution of India, thereby raising their number to 22?
(a) Constitution (Ninetieth Amendment) Act  
(b) Constitution (Ninety-first Amendment) Act  
(c) Constitution (Ninety-second Amendment) Act  
(d) Constitution (Ninety-third Amendment) Act

Ans. (c)

Explanation
The amendment made in the 92nd Amendment Act 2003, came into force into July 2004 when it received the presidential assent. It provided for four more national the eighth schedule of the Constitution, India, thereby raising their members to 22.

51. Which one of the following is the largest (area-wise) Lok Sabha constituency?
(a) Kangra
(b) Ladakh
(c) Kachchh
(d) Bhilwara

Ans. (b)

Explanation
Ladakh Lok Sabha Constituency is the largest (Area-wise) lok sabha constituency in India. The largest Lok Sabha constituency in India is Area wise as under:

<table>
<thead>
<tr>
<th>Name of Lok Sabha constituency</th>
<th>Area (sq. km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ladakh</td>
<td>1,73,266</td>
</tr>
<tr>
<td>2. Barmer</td>
<td>71,601</td>
</tr>
<tr>
<td>3. Kutch</td>
<td>41,644</td>
</tr>
<tr>
<td>4. Arunachal West</td>
<td>40,572</td>
</tr>
<tr>
<td>5. Arunachal East</td>
<td>39,749</td>
</tr>
</tbody>
</table>

Source: India 2008 : Publication Division, Govt. of India

52. Consider the following statements:
1. Justice V. R. Krishna Iyer was the Chief Justice of India.
2. Justice V. R. Krishna Iyer is considered as one of the progenitors of Public Interest Litigation (PIL) in the Indian judicial system.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans. (b)

Explanation
V. R. Krishna Iyer became a judge of the Supreme Court of India in 1973. During this time the Supreme Court interpreted Article 21 of the Constitution of India in the sense that the national government was obliged to provide free legal services to accused people in custody. He retired from the Supreme Court in November, 1980. Justice Krishna Iyer was never became the Chief Justice of India. V.R. Krishna Iyer known for his human right approach and literary merit in decision-making.


53. Which Schedule of Constitution of India contains special provisions for the administration and control of Scheduled Areas in several States?
(a) Third
(b) Fifth
(c) Seventh
(d) Ninth

Ans. (b)

Explanation
Fifth schedule of the Constitution of India contains special provisions for administration and control of scheduled area and schedule tribes in several states. Sixth schedule contains provision as to the administration of tribal area in the states of Assam, Meghalaya, Tripura, Mizoram and Arunachal Pradesh.


54. Who among the following have held the office of the Vice-President of India?
1. Mohammad Hidayatullah
2. Fakhruddin Ali Ahmed
3. Neelam Sanjiva Reddy

4. Shankar Dayal Sharma

Codes:
(a) 1, 2, 3 and 4
(b) 1 and 4
(c) 2 and 3
(d) 3 and 4

Ans. (b)

Explanation
Justice Mohammad Hidayatullah during the tenure 1979-1984 and Dr. Shankar Dayal Sharma during 1987-1992 hold the office of the Vice-President of India.


55. Match List-I with List-II and select the correct answer using the codes given below the Lists:

<table>
<thead>
<tr>
<th>List-I</th>
<th>List-II</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. N. Ray</td>
<td>1. Chief Justice of India</td>
</tr>
<tr>
<td>A. Nagender Singh</td>
<td>B. Nagender Singh</td>
</tr>
<tr>
<td>C. R. K. Trivedi</td>
<td>3. Chief Justice of India</td>
</tr>
<tr>
<td>D. Ashok Desai</td>
<td>4. Attorney General of India</td>
</tr>
</tbody>
</table>

Codes:
(a) 1 4 2 3
(b) 2 3 1 4
(c) 1 3 2 4
(d) 2 4 1 3

Ans. (b)

Explanation
The correct matching List-I with List-II is given below:

<table>
<thead>
<tr>
<th>List-I</th>
<th>List-II</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. N. Ray</td>
<td>1. Chief Justice of India</td>
</tr>
<tr>
<td>A. Nagender Singh</td>
<td>2. President, International Court of Justice</td>
</tr>
<tr>
<td>C. R. K. Trivedi</td>
<td>B. A. N. Ray</td>
</tr>
<tr>
<td>D. Ashok Desai</td>
<td>4. Attorney General of India</td>
</tr>
</tbody>
</table>

Source: Manorama Year Book-2008

56. How many High Courts in India have jurisdiction over more than one State (Union Territories not included)?
(a) 2
(b) 3
(c) 4
(d) 5

Ans. (a)
Each State has a High Court, which is the highest judicial organ of the states. Punjab, Haryana and union territory of Chandigarh have a common High Court. A union territory can also have a separate High Court. Thus, the National Capital Territory of Delhi has a separate High Court. At present there are 21 High Courts in India. Jurisdiction and seats of High Court is given below:

<table>
<thead>
<tr>
<th>Name of High Court</th>
<th>Territorial jurisdiction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Allahabad</td>
<td>Uttar Pradesh</td>
</tr>
<tr>
<td>2. Andhra Pradesh</td>
<td>Andhra Pradesh</td>
</tr>
<tr>
<td>3. Bombay</td>
<td>Maharashtra, Goa, Dadra and Nagar Haveli, Daman and Diu.</td>
</tr>
<tr>
<td>4. Kolkata</td>
<td>West Bengal, Andaman and Nicobar</td>
</tr>
<tr>
<td>5. Delhi</td>
<td>Delhi</td>
</tr>
<tr>
<td>6. Guwahati</td>
<td>Assam, Manipur, Meghalaya, Nagaland, Tripura, Mizoram, Arunachal Pradesh</td>
</tr>
<tr>
<td>7. Gujarat</td>
<td>Gujarat</td>
</tr>
<tr>
<td>8. Himachal Pradesh</td>
<td>Himachal Pradesh</td>
</tr>
<tr>
<td>10. Karnataka</td>
<td>Karnataka</td>
</tr>
<tr>
<td>11. Kerala</td>
<td>Kerala, Lakshadweep</td>
</tr>
<tr>
<td>12. Madhya Pradesh</td>
<td>Madhya Pradesh</td>
</tr>
<tr>
<td>13. Chennai</td>
<td>Tamil Nadu, Puducherry</td>
</tr>
<tr>
<td>14. Orissa</td>
<td>Orissa</td>
</tr>
<tr>
<td>15. Patna</td>
<td>Bihar</td>
</tr>
<tr>
<td>16. Punjab &amp; Haryana</td>
<td>Punjab, Haryana, Chandigarh</td>
</tr>
<tr>
<td>17. Rajasthan</td>
<td>Rajasthan</td>
</tr>
<tr>
<td>18. Sikkim</td>
<td>Sikkim</td>
</tr>
<tr>
<td>19. Bilaspur</td>
<td>Chhattisgarh</td>
</tr>
<tr>
<td>20. Nanital</td>
<td>Uttar Pradesh</td>
</tr>
<tr>
<td>21. Ranchi</td>
<td>Jharkhand</td>
</tr>
</tbody>
</table>

Hence, 96 union territories not included, than there are two High Courts, which have jurisdiction over more than one state.

(1) Guwahati High Court
(2) Punjab and Haryana High Court

**Source:** The Constitution of India—D. D. Basu

---

**Economics**

57. How is the United Nations Monetary and Financial Conference wherein the agreements were signed to set up IBRD, GATT and IMF, commonly known?

- (a) Bandung Conference
- (b) Bretton Woods Conference
- (c) Versailles Conference
- (d) Yalta Conference

**Ans.** (b)

**Explanation**

The United National Monetary and Finance Conference, commonly known as Bretton Woods Conference. It was a gathering of 730 delegates from all 43 Allied Nations at the Mount Washington Hotel, situated in Bretton Woods, New Hampshire to regulate the international monetary and financial order after the conclusion of World War II. The conference was held from 1 July, 1944 to 22 July, 1944. In the conference the agreements was signed to set up the International Bank for Reconstruction and Development, the General Agreement on Tariffs and Trade (GATT), and the International Monetary Fund (IMF).

**Source:** Manorama Year Book-2008

58. Which of the following are the public sector undertakings of the Government of India?

1. Balmer Lawrie and Company Ltd.
2. Dredging Corporation of India
3. Educational Consultants of India Ltd.

**Codes:**

- (a) 1 and 2
- (b) 2 and 3
- (c) 1 and 3
- (d) 1, 2 and 3

**Ans.** (d)

**Explanation**

Balmer Lawrie and Company Ltd. is a public sector undertaking company of India. Its headquarters is at Kolkata. It was established in the year 1867 by two Scotsmen, George Stephen Balmer and Alexander Lawrie. It manufactures industries packaging, bassels and drums, LPG cylinders, greases and lubricants, leather chemicals, functional additives and marine freight containers.

Dredging Corporation of India is a public sector undertaking company of India. It headquarters is at Vishakhapatnam. It was established in the year 1976 to provide Dredging services to the major ports of the country in India.

Educational Consultants India Limited (Ed. CIL) was conceived and incorporated as a public sector enterprise by the government of India in 1981, under the Ministry of Education and Culture (Reconstituted as the Ministry of Human Resource Development in 1985). It offer consultancy and technical services in different areas of Education and Human Resource Development not only within the country but also on a global basis.

59. India is a member of which of the following?

1. Asian Development Bank
2. Asia-Pacific Economic Cooperation
3. Colombo Plan
4. Organization for Economic Cooperation and Development (OECD)

**Codes:**

- (a) 1 and 3
- (b) 2 and 4
- (c) 1, 2 and 3
- (d) 1, 2, 3 and 4

**Ans.** (a)

**Explanation**

India is only member of Asian Development Bank as well as Colombo plan. Asian Development Bank was established in 1966. ADB has grown to encompass 67 members of which 48 are from within the Asia and Pacific region and 19 outside.

The Colombo plan provides aid to areas of south and southeast Asia. Headquarters is in Colombo, the capital of Sri Lanka. The Colombo plan began in July, 1951.

**Source:** Indian Economy—Dutt & Sundaram
60. Consider the following statements:
1. The Nuclear Suppliers Group has 45 countries as its members.
2. India is a member of the Nuclear Suppliers Group.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
Ans. (d)

Explanation
The Nuclear Suppliers Group has 45 countries as its member and India is a member of the Nuclear Suppliers Group. Nuclear Suppliers Group established in 1975.

Source: Current Affairs

61. Which of the following pairs about India’s economic indicator and agricultural production (all in round figures) are correctly matched?
1. GDP per capita (current price): Rs. 37,000
2. Rice: 180 million tons
3. Wheat: 75 million tons
Codes:
(a) 1, 2 and 3
(b) 1 and 2
(c) 2 and 3
(d) 1 and 3
Ans. (d)

Explanation
Production of rice and wheat is 93 million tonnes and 75.5 million tonnes respectively in 2007-08 financial year. GDP Per Capita is Rs. 37,000. So, choice (d) is correct.

62. In August 2006, the Government of India notified the Rural Electrification Policy. This policy aims at provision of access to all households by which year?
(a) 2008
(b) 2009
(c) 2010
(d) 2012
Ans. (d)

Explanation
In August, 2006, the Government of India notified the Rural Electrification Policy. This policy aims at provision of access to all households by 2012. To meet the projected power requirement by 2012, an additional capacity of 1,00,000 MW is required in the next two five year plans. The power sector is likely to receive investments of over Rs. 248000 crore during the 11th plan (2007-2012). The approach paper for the 11th plan has earmarked. Capacity addition of 62000 MW during 2007-2012. According to the approach paper of the 11th plan 6000 MW of power from non-conventional sources and 7000 MW from captive sources would be generated during the 11th plan. Under the Electricity Act, 2003 provisions were made to encourage from captive source.

Source: Indian Economy—Mishra & Pury

63. Consider the following statements with reference to Indira Gandhi National Old Age Pension Scheme (IGNOAPS):
1. All persons of 60 years or above belonging to the households below poverty line in rural areas are eligible.
2. The Central Assistance under this scheme is at the rate of Rs. 300 per month per beneficiary. Under the scheme, States have been urged to give matching amounts.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
Ans. (d)

Explanation
Under Indira Gandhi National Old Age Pension Scheme a person who is 65 years or older and belonging to the households below poverty line in rural areas are eligible. The Central Assistance under this scheme is at the rate of Rs. 200 per month per beneficiary. This scheme launched by the Prime Minister Dr. Manmohan Singh. Speaking on the occasion the Prime Minister, Dr. Manmohan Singh said by providing some sense of security to our vulnerable elderly citizen in 1995.

Source: Indian Economy—Dutt & Sundaram

64. What is the name of the scheme which provides training and skills to women in traditional and non-traditional trades?
(a) Kishori Shakti Yojna
(b) Rashtriya Mahila Kosh
(c) Swasthini Sadbhavana
(d) Swavlamban
Ans. (d)

Explanation
Swavlamban scheme is being implemented by the department of women and child development with partial assistance from Norway since 1982. Its basic objective is to provide training and skill to women to facilitate them obtain employment or self-employment on a sustained basis. The target group under the scheme are the poor and needy women, women from weaker section of the society, such as schedule caste and schedule tribes etc. Financial assistance is provided to undertake training programmes for women in both traditional as well as non-traditional trades.

Source: Indian Economy—Dutt & Sundaram

65. In order of their distances from the sun, which of the following planets lie between Mars and Uranus?
(a) Earth and Jupiter
(b) Jupiter and Saturn
(c) Saturn and Earth
(d) Saturn and Neptune
Ans. (b)

Explanation
As per distance from sun, Jupiter and Saturn lie in between Mars and Uranus. The solar system comprises the sun, eight planets (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune) revolving around the sun. The direction of the planets in their revolution around the sun is from west to east. The sun, which is the largest body of the solar system, is also the center of the solar system. The average distance of the sun from the earth is about 150,000,000 km. The earth is the third nearest planet to the sun, after Mercury and Venus. Neptune is farthest from the sun. The planet nearest to the earth is Venus. Mercury and Venus which are closer to the
sun than the earth are called inferior planets. All planets at a greater distance from the sun than the earth are called superior planets. Venus is the brightest among the planets. The following diagram explains the distance of planets:

Source: Physical Geography—Savindra Singh

66. How can the height of a person who is six feet tall be expressed (approximately) in nanometres?
(a) $183 \times 10^6$ nm
(b) $234 \times 10^6$ nm
(c) $183 \times 10^7$ nm
(d) $234 \times 10^7$ nm

Ans. (c)

Explanation

\[
1 \text{ foot} = 30.479 \text{ cm} = 0.30479 \text{ m} \\
\therefore 6 \text{ feet} = 1.82874 \text{ m} = 183 \times 10^{-2} \text{ m} = 183 \times 10^7 \text{ nm} = 183 \times 10^7 \text{ nm}
\]

67. A person is sitting in a car which is at rest. The reaction from the road at each of the four wheels of the car is $R$. When the car runs on a straight level road, how will the reaction at either of the front wheels vary?
(a) It will be greater than $R$
(b) It will be less than $R$
(c) It will be equal to $R$
(d) It shall depend on the material of the road.

Ans. (c)

Explanation

The Dynamic Friction in any object is proportional to its inertial momentum and it is less than static friction. When the car runs on a straight-level road, the reaction either of the front wheels will be equal to $R$.

68. Assertion (A): In the visible spectrum of light, red light is more energetic than green light.
Reason (R): The wavelength of red light is more than that of green light.

Ans. (d)

Explanation

Light is an electromagnetic radiation that has a wavelength in the range of 380–780 nanometers and may be perceived by the normal unaided human eye. It is a form of energy, which travels in straight lines and causes the sensation of vision. If we interpose a small obstacle between the object and our eyes, we are unable to see it. In 1906, Newton passed a beam of light through a prism and found that it has seven colours, viz. (i) Violet (ii) Indigo, (iii) Blue, (iv) Green, (v) Yellow, (vi) Orange, (vii) Red. The band of colours so formed is called a spectrum in which violet and red bands form the extremes. Violet and Blue light have short wavelength, while the red light has long wavelength. So, choose (d) is correct.

Source: Physics Class XI—NCERT

Reason (R): Radio waves are electromagnetic in nature.

Ans. (d)

Explanation

Radio waves do not bend in a magnetic field but radiate in an electromagnetic field. So assertion (A) is False and reason (R) is true. Hence, answer is option (d).

Source: Physics Class XI—NCERT

70. Who among the following scientists shared the Nobel Prize in Physics with his son?
(a) Max Planck
(b) Albert Einstein
(c) William Henry Bragg
(d) Enrico Fermi

Ans. (c)

Explanation

Sir William Henry Bragg and his son, Sir William Lawrence Bragg, both received the Nobel Prize in Physics in 1915. The Braggs are the first and only father/son team to have jointly received the Nobel Prize. William Lawrence Bragg was awarded the Nobel prize at the age of 25 and as of yet he is still the youngest ever laureate.

Source: Manorama Year Book—2007

71. Consider the following statements in respect of a jet engine and a rocket:
1. A jet engine uses the surrounding air for its oxygen supply and so is unsuitable for motion in space.
2. A rocket carries its own supply of oxygen in the gas form, and fuel.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans. (c)

Explanation

The fuel used in rockets is called rocket fuel (rocket propellant). A propellant is an explosive used to fire a projectile from a gun. It is a combination of an oxidizer (like liquid oxygen, liquid fluorine hydrogen peroxide or nitric acid) and a fuel which, when ignited, undergoes combustion to release large quantities of hot gases. The passage of gases through the nozzle of the rocket motor provides the necessary thrust for the rocket to move forward according
to Newton's third law of motion. Depending upon their physical state, propellants are classified into three types:

(i) Liquid propellants, (ii) Solid propellants,
(iii) Hybrid propellants.

Source: Science & Technology—NCERT

> 72. Consider the following statements:

1. A widely used musical scale called diatonic scale has seven frequencies.
2. The frequency of the note Sa (Sa) is 256 Hz and that of Ni 512 Hz.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans. (a)

Explanation

In major scale the tone is DO-RE-MI. FA-SO-LA-TI and in minor scale it becomes LA-TI-DO-RE-MI-FA-SO. Frequency is the number of cycles per second. The frequency of each Swar is different, and that is why we can identify, Sa, Re, Ga, etc. The frequency of Sa is 240 Hz, while that of Re is 270 Hz.

> 73. How much is one barrel of oil approximately equal to?

(a) 131 litre
(b) 159 litre
(c) 257 litre
(d) 321 litre

Ans. (b)

Explanation

One barrel oil = 42. American gallon
one litre = 0.22 gallon,
Thus, one barrel = 159 litre (approx).

Chemistry

> 74. What is the pH level of blood of a normal person?

(a) 4.5-4.6
(b) 6.45-6.55
(c) 7.35-7.45
(d) 8.25-8.35

Ans. (c)

Explanation

pH is defined as the negative logarithm of hydrogen ion concentration in gram ion per litre of a solution:

\[ pH = -\log [H^+] \]

The acidities and basicities of compounds are denoted by the pH value of their aqueous solutions. This is just a number (from 0 to 14) without any units, any solution with pH between 0 and 6.99 is acidic, while any solution with pH between 7.01 and 14 is basic. A solution with a pH of 7 is neutral. The lower the pH of its aqueous solution the more acidic is the compound and the higher the pH of a compound, the greater is its basicity some useful matters and their pH value are given below:

<table>
<thead>
<tr>
<th>Name of matter</th>
<th>pH value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lemon</td>
<td>2.2-2.4</td>
</tr>
<tr>
<td>Wine</td>
<td>2.8-3.8</td>
</tr>
<tr>
<td>Bear</td>
<td>4.0-5.0</td>
</tr>
<tr>
<td>Human Urine</td>
<td>5.5-7.5</td>
</tr>
<tr>
<td>Human Blood</td>
<td>7.3-7.5</td>
</tr>
<tr>
<td>Sirka</td>
<td>2.4-3.4</td>
</tr>
<tr>
<td>Tomato juice</td>
<td>4.0-4.4</td>
</tr>
<tr>
<td>Milk</td>
<td>6.4</td>
</tr>
</tbody>
</table>

Source: Chemistry Class-XII—NCERT

> 75. What are Rubies and Sapphires chemically known as?

(a) Silicon dioxide  (b) Aluminium oxide  
(c) Lead tetroxide  (d) Boron nitride

Ans. (b)

Explanation

Sapphire refers to gem varieties of the mineral corundum, an aluminium oxide (Al₂O₃), when it is a colour other than red, sapphire can be found naturally or manufactured in large crystal boules. Because of its remarkable hardness sapphire is used in many applications, including infrared optical components, watch crystals, high durability windows, and wafers for the deposition of semiconductors, such as GaN nanorods. The mineral corundum consists of pure aluminium oxide. Trace amounts of other elements such as iron, titanium, and chromium give corundum their blue, yellow, pink, purple, orange or greenish colour. Sapphire includes many gemstone quality varieties of the mineral corundum except the fully saturated red variety, which is instead known as ruby, and the pinkish orange variety known as padparadscha.

Source: Chemistry, Class-XI—NCERT

> 76. Which one of the following is also called Stranger Gas?

(a) Argon  (b) Neon  (c) Xenon  (d) Nitrous oxide

Ans. (c)

Explanation

Helium, neon, argon, krypton, xenon and radon are Noble gases. Since these gases are present in air in very small amounts, these are also called rare gases. Radon is not present in air. These gases do not enter into chemical reactions, so these are called inert gases. These are useful in different ways. Helium is used in hillering meteorological balloons and is also used by sea divers. Neon is used extensively in making advertising signs. Argon is used to create an inert atmosphere in chemical reactions. Krypton and xenon are used in electrical values and TV tubes and also in lighthouses and miner lamps. Xenon is becoming less and less of a stranger for anesthetistologist.

Source: General Science—NCERT

> 77. Mixture of which one of the following pairs of gases is the cause of occurrence of most of the explosions in mines?

(a) Hydrogen and oxygen  
(b) Oxygen and acetylene  
(c) Methane and air  
(d) Carbon dioxide and methane

Ans. (c)

Explanation

Mixture of methane and air pairs of gases is the cause of occurrence of most of the explosions in mines.

Source: General Science—NCERT

> 78. Which one of the following pairs of metals constitutes the lightest metal and the heaviest metal, respectively?

(a) Lithium and mercury  
(b) Lithium and osmium

Ans. (b)

Explanation
(c) Aluminium and osmium
(d) Aluminium and mercury

Ans. (b)

Explanation

Above mentioned pairs of metals Lithium constitutes the lightest metal and osmium constitutes the heaviest metal. (Above) mentioned metals, the atomic serial number, atomic weight and density are in this way:

<table>
<thead>
<tr>
<th>Atomic serial No.</th>
<th>Atomic weight (amu)</th>
<th>Density (g/cc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In P.T.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Lithium (Li)</td>
<td>3</td>
<td>6.941</td>
</tr>
<tr>
<td>2. Mercury (Hg)</td>
<td>80</td>
<td>200.59</td>
</tr>
<tr>
<td>3. Osmium (Os)</td>
<td>76</td>
<td>190.23</td>
</tr>
<tr>
<td>4. Aluminium (Al)</td>
<td>13</td>
<td>26.982</td>
</tr>
</tbody>
</table>

Hence, it is clear that Lithium (Li) is the lightest metal because its density is low and osmium is the heaviest metal because its density is high.

Source: Chemistry, Class XI—NCERT

> 79. Among the following, which one lays eggs and does not produce young ones directly?
(a) Echidna  
(b) Kangaroo  
(c) Porcupine  
(d) Whale

Ans. (a)

Explanation

Echidna is the only egg-laying mammal known as monotremes: The female lays a single, soft-shelled, leathery egg twenty-two days after mating and deposits it directly into her pouch.

Source: General Science—NCERT

> 80. The release of which one of the following into ponds and wells helps in controlling the mosquitoes?
(a) Crab  
(b) Dogfish  
(c) Gambusia fish  
(d) Snail

Ans. (c)

Explanation

Gambusia affinis, appropriately named the ‘mosquito fish’, is a small, guppy-like fish ranging in size from approximately 3 to 1 inches long. As its name implies, it is a natural predator of mosquito larvae. Gambusia affinis is a voracious predator.

Source: Biology—NCERT

> 81. Among the following, which one is not an ape?
(a) Gibbon  
(b) Gorilla  
(c) Langur  
(d) Orangutan

Ans. (c)

Explanation

Gibbons are the small apes in the family Hyllobatidae. The family is divided into four genera based on their diploid chromosome number: The Orangutans are two species of great apes known for their intelligence, long arms and reddish-brown hair. Native to Indonesia and Malaysia. The gray langurs are a group of old world monkeys and make up the entirety of the genus semnopithecus. Monkeys and apes belong to the group of mammals called Primate. There are 256 known species of primate. The smallest primate is the pygmy marmoset, which weight only 30 g.

Source: Biology—NCERT

> 82. Assertion (A): In human body, liver has an important role in fat digestion.

Reason (R): Liver produces two important fat-digesting enzymes.

Codes:
(a) Both A and R are individually true and R is the correct explanation of A
(b) Both A and R are individually true, but R is not the correct explanation of A
(c) A is true, but R is false
(d) A is false, but R is true

Ans. (c)

Explanation

The liver, situated on the right side of the stomach is the largest gland in the human body. It is dark brown in colour and divided into two lobes, varying in weight from 1.359 g to 1.812 g. The gall bladder is attached to the liver and stores bile produced by it. The liver secretes bile, forms and stores glycogen and plays an important part in metabolism of protein and fats. The bile produced by the liver is an important agent to digestion, especially fats. It contains water, bile salts and bile pigments. It does not contain digestive enzymes and as such does not take part directly in digestion. It contains salts like bicarbonate, glycocholate and taurocholate of sodium. The sodium bicarbonate neutralizes the acid and makes the churned food called churned alkaline, whereas glycocholate and taurocholate of sodium break down the fats of tissues into small globules. So choice (c) is correct.

Source: We & Our Health—NBT

> 83. Which one of the following is an insectivorous plant?
(a) Passion flower plant  
(b) Pitcher plant  
(c) Night queen  
(d) Flame of the forest

Ans. (b)

Explanation

Carnivorous plants (sometimes called insectivorous plants) are plants that derive some or most of their nutrients from trapping and consuming animals or protozoans, typically insects and other arthropods. Carnivorous plants appear adapted to grow in places where the soil is thin or poor in nutrients, especially nitrogen, such as acidic bog and rock outcroppings. Charles Darwin wrote the first well-known treatise on carnivorous plants in 1875. Insectivorous plants also exist, including the venus gyntrap, several type of pitcher plants, butterworts, sundews, bladder worms, the waterwheel plant broaching bromeliads and others. These generally grow nitrogen poor soils, which they instead obtain by trapping insects. Technically, these plants are not strictly insectivorous, as they consume any animal small enough to be trapped by him; indeed the larger varieties of
pitcher plant have been known to consume small rodents and lizard.

Source : Biology—NCERT

> 84. For which one of the following snakes is the diet mainly composed of other snakes?
(a) Krait
(b) Russell’s viper
(c) Rattlesnake
(d) King cobra

Ans. (d)

Explanation
King cobra snakes is the diet mainly composed of other snakes. Many people believe that the South American anaconda is the longest snake. There are reports of anacondas up to 36.5 m long, but this has never been proved. Approx number of species of snakes is 2,978.

Source : Biology—NCERT

> 85. In which one of the following kinds of organisms is the phenomenon found wherein the female kills the male after copulation?
(a) Dragonfly
(b) Honeybee
(c) Spider
(d) Pit viper

Ans. (c)

Explanation
Sexual Cannibalism is a special case of cannibalism in which a female organism kills and consumes male of the same species, before during or after copulation. Rarely these roles are reversed. Although other forms of cannibalism are widespread in the animal kingdom, sexual cannibalism has been documented only in arachnids insects and amphipods although anecdotal evidence suggests its existence in gastropods and copepods as well. Despite its overall rarity, sexual cannibalism is common in many families of spiders and scorpions and can have important effect on population size and sex ratio. Among insects sexual cannibalism is a nearly universal habit among mantids but is otherwise rare. In most species in which it occurs, sexual cannibalism is related to the larger size of the female due to sexual dimorphism.

Source : Biology—NCERT

Science of Technology

> 86. Which of the following pairs are correctly matched?

<table>
<thead>
<tr>
<th>Institute</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. National Centre for Cell Science</td>
<td>Pune</td>
</tr>
<tr>
<td>2. Centre for DNA Fingerprinting and Diagnostics</td>
<td>Hyderabad</td>
</tr>
<tr>
<td>3. National Brain Research Centre</td>
<td>Gurgaon</td>
</tr>
</tbody>
</table>

Codes:
(a) 1, 2 and 3
(b) 1 and 2
(c) 2 and 3
(d) 1 and 3

Ans. (c)

Explanation
National Centre for Cell Science is situated in Pune, not in Mysore.
The correctly matched pairs are in this way:

Source : Current Affairs

> 87. Where was the first desalination plant in India to produce one lakh litres freshwater per day based on low temperature thermal desalination principle commissioned?
(a) Kavaratti
(b) Port Blair
(c) Mangalore
(d) Valsad

Ans. (a)

Explanation
The world’s first ever low temperature thermal desalination plant (LTID) was opened in Kavaratti. It is the capital of Indian island Lakshadweep, which is a union territory. It is the first desalination plant in India to produce one lakh litre freshwater per day based on low temperature.

> 88. Consider the following statements:
1. Clean Development Mechanism (CDM) in respect of carbon credits is one of the Kyoto Protocol mechanisms.
2. Under the CDM, the projects handled pertain only to the Annex-I countries.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans. (c)

Explanation
The Clean Development Mechanism (CDM) is an arrangement under the Kyoto Protocol allowing industrialised countries with a greenhouse gas reduction commitment to invest in projects that reduce emissions in developing countries as an alternative to more expensive emission reductions in their own countries. A crucial feature of an approved CDM carbon project is that it has established the planned reduction would not occur without the additional incentive provided by emission reductions credits. This concept is known as ‘additionality’. The CDM allows net global greenhouse gas emissions to be reduced at a much lower global cost by financing emissions reduction projects in developing countries where cost are lower than in industrialist countries.

Source : Manorama Year Book-2007

> 89. Who among the following discovered heavy water?
(a) Heinrich Hertz
(b) H. C. Urey
(c) G. Mehdel
(d) Joseph Priestly

Ans. (b)

Explanation
Harold Urey discovered the isotope deuterium in 1931 and was later able to concentrate it in water. Harold Urey’s mentor Gilbert Newton Lewis isolated the first sample of pure heavy water by electrolysis in 1933.

Source : Manorama Year Book-2007

> 90. Which one of the following is a spacecraft?
(a) Apophis
(b) Cassini
(c) Spitzer
(d) Tech Sar

Ans. (b)
93. Which of the following pairs is/are correctly matched?
1. Francis Collins : Mapping human genome
2. Sergey Brin : Google Search Engine

Codes:
(a) 1 and 2  
(b) 2 and 3  
(c) 3 only   
(d) 1, 2 and 3

Ans. (d)

Explanation
Francis Collins is an American Physician geneticist. He is well known for his landmark discoveries of disease genes. He is the Director of National Human Genome Research Institute.
Sergey Brin is Russian born American entrepreneur. who co-founded Google with Larry page. Jimmy Wales is an American best known for his role in Co. founding Wikipedia. a free open content encyclopedia in 2001.

94. Consider the following statements about probiotic food:
1. Probiotic food contains live bacteria which are considered beneficial to humans.
2. Probiotic food helps in maintaining gut flora.

Which of the statements given above is/are correct?
(a) 1 only  
(b) 2 only  
(c) Both 1 and 2  
(d) Neither 1 nor 2

Ans. (c)

Explanation
Probiotic food is food that contains live bacteria, which is considered beneficial and not harmful to humans. Billions of bacteria inhabit the human digestive system. These bacteria are referred to as the gut flora. The gut flora is needed to break down food remains that have not been earlier in the digestive system and to discourage harmful bacteria and yeasts from invading the body. The gut flora also produces beneficial substances such as vitamins like vitamin K. Generally probiotics help to maintain a healthy digestive system by maintaining a balance between the harmful and beneficial bacteria in the gut. So, choice (c) is correct.

95. Consider the following:
1. Rice fields
2. Coal mining
3. Domestic animals
4. Wetlands

Which of the above are sources of methane, a major greenhouse gas?
(a) 1 and 4
(b) 2 and 3
(c) 1, 2 and 3
(d) 1, 2, 3 and 4

Ans. (d)

Explanation
Rice agriculture is a big source of atmospheric methane, possibly the biggest of man made methane source. The warm, waterlogged soil of rice paddies provides ideal conditions for methanogenesis and though some of the methane produced is usually oxidized by methanotrophs in the shallow overlying water, the vast majority is released into the atmosphere. Natural sources of methane are dominated by wetlands.

Source: Agriculture Geography—Majid Hussain
98. What is Bisphenol A (BPA)?
(a) A medical test for detecting cancer
(b) A test for testing the use of drugs to improve performance by athletes
(c) A chemical used for the development of food-packaging materials
(d) A special type of alloy steel
Ans. (c)

Explanation
Bisphenol A (abbreviated BPA) is an organic compound with the chemical formula \((\text{CH}_3)_2\text{C}(\text{C}_6\text{H}_4\text{OH})_2\). It is used in the production of epoxy resins and polycarbonate plastics. These plastics are used in many food and drink packaging applications.

97. Which one of the following laser types is used in a laser printer?
(a) Dye laser
(b) Gas laser
(c) Semiconductor laser
(d) Excimer laser
Ans. (b)

Explanation
Printer is a output device. Printers print characters on paper or other similar medium. Printers come in three popular versions:
(i) Dot-Matrix printer
(ii) Ink-jet printer
(iii) Laser printers
Dot-matrix printers print characters in the form of combinations of very tiny dots. The printing head aligns ‘pins’ to match a particular pattern falls between the head and the paper. The ink-ribbon causes a pattern similar to the pins to emerge on the paper. The dots are so close to each other that the character looks almost smooth. Ink-jet printers spray jets of ink onto the paper to print any character. The characters are absolutely smooth as ink is sprayed in a continuous flow. Laser printer on the other hand uses a laser beam to actually burn the characters onto the paper. Laser printer is a very high speed printer that uses a combination of laser beam, electrophotographic technique to create printed outputs at a speed in excess of 13,000 line per minute. Speed can range from 10 pages a minute to about 200 pages per minutes.

99. What is the number of terms in the series 117, 120, 123, 126, ..., 333?
(a) 72
(b) 73
(c) 76
(d) 79
Ans. (b)

Explanation
The sequence is in Arithmetic progression.
\[
\begin{align*}
a &= 117, \quad d = 3 \\
n^{th} \text{ term} \quad in &= 333. \\
\therefore \quad tn &= a + (n - 1) \cdot d \\
or, \quad 333 &= 117 + (n - 1) \cdot 3 \\
or, \quad 333 &= 117 + 3n - 3 \\
or, \quad 333 &= 117 + 3n - 3 \\
or, \quad 3n &= 333 - 114 = 219 \\
or, \quad n &= \frac{219}{3} = 73
\end{align*}
\]
Hence, (b) is correct.

100. March 1, 2008 was Saturday. Which day was it on March 1, 2002?
(a) Thursday
(b) Friday
(c) Saturday
(d) Sunday
Ans. (b)

Explanation
Method 1
In a year, there are 52 weeks and 1 day, and in leap year there are 52 weeks and 2 days, which are described as extra days.
\[
\begin{align*}
\therefore \quad \text{From March 1, 2002 to March 1, 2008, there are 6 extra days for six years and 2 extra days for leap year of 2004 and 2008. Out of total 8 extra days, seven are being converted into week and 1 extra day will be Saturday.} \\
\therefore \quad \text{The previous day was Friday.}
\end{align*}
\]
Method 2
\[
\begin{align*}
\text{March 1, 2008} &= \quad \text{Saturday (leap year)} \\
\text{March 1, 2007} &= \quad \text{Thursday} \\
\text{March 1, 2006} &= \quad \text{Wednesday} \\
\text{March 1, 2005} &= \quad \text{Tuesday} \\
\text{March 1, 2004} &= \quad \text{Sunday (leap year)} \\
\text{March 1, 2003} &= \quad \text{Saturday} \\
\text{March 1, 2002} &= \quad \text{Friday}
\end{align*}
\]

Mathematics
101. What does Baudhayan theorem (Baudhayan Sulva Sutra) relate to?
(a) Lengths of sides of a right-angled triangle
(b) Calculation of the value of \(\pi\)
(c) Logarithmic calculations
(d) Normal distribution curve
Ans. (a)

Explanation
The so called Pythagoras theorem— the square of the hypotenuse of a right-angled triangle equals to the sum of the square of the two sides was worked out earlier in India by Baudhayan in Baudhayan Sulva Sutra. Pythagoras was a Greek philosopher and mathematician, who propounded various principles of geometry.

Source: Manorama Year Book-2007
>102.

In how many different ways can all of 5 identical balls be placed in the cells shown above such that each row contains at least 1 ball?

(a) 64  
(b) 81  
(c) 84  
(d) 108  

Ans. (d)

**Explanation**

**Case I:** Out of 3 rows, one row contains 3 balls and the other two rows contain one ball each such that the balls can be arranged in \( 3 \times C_2 \times C_2 \times C_2 = 27 \) ways.

**Case II:** Out of the 3 rows, one row contains 1 ball and other two rows have two balls each. Which can be arranged as \( C_3 \times C_2 \times C_2 \times C_2 = 81 \) ways.

Total No. of arrangements = 27 + 81 = 108.

>103. There are 6 different letters and 6 correspondingly addressed envelopes. If the letters are randomly put in the envelopes, what is the probability that exactly 5 letters go into the correctly addressed envelopes?

(a) Zero  
(b) 1/6  
(c) 1/2  
(d) 5/6  

Ans. (a)

**Explanation**

If 5 of them will be placed in correctly addressed envelopes, then sixth cannot be placed in wrong envelopes. Hence, the probability of event is zero.

>104.

There are two identical red, two identical black and two identical white balls. In how many different ways can the balls be placed in the cells (each cell to contain one ball) shown above such that balls of the same colour do not occupy any two consecutive cells?

(a) 15  
(b) 18  
(c) 24  
(d) 30  

Ans. (c)

**Explanation**

**Case I:** 2 ball of same colour and two balls of different colour are arranged.

Out of 3 colour, one colour (of which two balls are to be arranged) can be selected in \( 3 \times C_2 \times C_2 \times C_2 = 3 \) ways.

Two balls of same colour and two balls of different colour can be arranged together in which two balls of same colour are adjacent as \( \frac{4! \times 3!}{2!} = 6 \) ways.

:. Total number of arrangements = \( 3 \times 6 = 18 \) ways

**Case II:** Two colour out of 3 can be selected in \( C_3 \times C_2 \times C_2 = 3 \) ways.

Now, 2 Balls of each colour can be arranged alternatively in 2 ways.

Hence, 4 Balls can be arranged (two of each colour) \( = 3 \times 2 = 6 \) ways.

The total number of arrangements = 18 + 6 = 24 ways.

>105.

How many different triangles are there in the figure shown above?

(a) 28  
(b) 24  
(c) 20  
(d) 16  

Ans. (a)

**Explanation**

28 different triangles are there in the figure shown in this question.

>106. In how many different ways can four books A, B, C, and D be arranged one above another in a vertical order such that the books A and B are never in continuous position?

(a) 9  
(b) 12  
(c) 14  
(d) 18  

Ans. (b)

**Explanation**

The number of arrangement in which A and B are not together = total number of arrangements - (number of arrangements in which A and B are together).

= \( 4! - 3 \times 2 = 24 - 12 = 12 \)

>107. Carpenter A can make a chair in 6 hours, carpenter B in 7 hours and carpenter C in 8 hours. If each carpenter works for 8 hours per day, how many chairs will be made in 21 days?

(a) 61  
(b) 67  
(c) 73  
(d) 79  

Ans. (c)

**Explanation**

\[
A \text{ can make in 21 days } = \frac{21 \times 8 \times 6}{6} = 28 \text{ chairs.}
\]

\[
B \text{ can make in 21 days } = \frac{21 \times 8 \times 7}{7} = 28 \text{ chairs.}
\]

\[
C \text{ can make in 21 days } = \frac{21 \times 8 \times 8}{8} = 21 \text{ chairs.}
\]

\[\therefore \text{ Total number of chairs } = 28 + 24 + 21 = 73 \text{ chairs.}\]

>108. A person purchases 100 pens at a discount of 10%. Then net amount of money spent by the person to purchase the pens is Rs. 600. The selling expenses incurred by the person are 15% on the net cost price. What should be the selling price for 100 pens in order to earn a profit of 25%?

(a) Rs. 802.50  
(b) Rs. 811.25  
(c) Rs. 862.50  
(d) Rs. 875  

Ans. (c)

**Explanation**

**Total Cost Price** = 600 + 15% of 600

\[= 600 + 600 \times \frac{15}{100}\]

\[= Rs. 690\]

**Profit** = 25%
\[ S.P. = C.P \left( \frac{100 + \text{Profit}}{100} \right) \]
\[ = 690 \left( \frac{100 + 25}{100} \right) = 690 \times \frac{125}{100} = Rs. 862.50 \]

109. A school teacher has to select the maximum possible number of different groups of 3 students out of a total of 6 students. In how many groups any particular student will be included?
(a) 6  (b) 8  
(c) 10  (d) 12

Ans. (c)

Explanation
One boy is in group, therefore other two can be selected out of remaining 5 in \( \binom{5}{2} \) ways = 10 ways.

110. In an examination, 70% of the students passed in the Paper I, and 60% of the students passed in the Paper II. 15% of the students failed in both the papers while 270 students passed in both the papers. What is the total number of students?
(a) 600  (b) 580  
(c) 560  (d) 540

Ans. (a)

Explanation
Using venn diagram to represents failed students.
Total Percentage of failed students = 15 + 15 = 30 = 55% Total percentage of students passed in both paper = 45% 
If total number of students = x 
:. \( x \times \frac{45}{100} = 270 \)
or, \( 45x = 270 \times 100 \)
or, \( x = \frac{270 \times 100}{45} = 600 \)
:. total number of students = 600.

111. Which one of the following is the correct sequence in respect of the Roman numerals—C, D, L and M?
(a) C > D > L > M  (b) M > L > D > C  
(c) M > D > C > L  (d) L > C > D > M

Ans. (d)

Explanation
The correct sequence in respect of the Roman numerals C, D, L and M are:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) L</td>
<td>50</td>
</tr>
<tr>
<td>(ii) C</td>
<td>100</td>
</tr>
<tr>
<td>(iii) D</td>
<td>500</td>
</tr>
<tr>
<td>(iv) M</td>
<td>1000</td>
</tr>
</tbody>
</table>

112. Where was the World Summit on Sustainable Development (Rio + 10) held?
(a) Davos  (b) Nova Scotia  
(c) Johannesburg  (d) Shanghai

Ans. (c)

113. Which one of the following countries won the Euro Football Tournament, 2004 held in Portugal?
(a) Italy  (b) France 
(c) Greece  (d) Portugal

Ans. (c)

Explanation
The Country Greece won the Euro Football Tournament, 2004 which is held in Portugal. The UEFA Euro 2004 (or first Euro 2004) was the twelfth edition of UEFA’s Quadriennial European Football Championship.

Source: Manorama Year Book-2008

114. "Hand-in-Hand 2007", a joint anti-terrorism military training was held by the officers of the Indian Army and officers of Army of which one of the following countries?
(a) China  (b) Japan 
(c) Russia  (d) USA

Ans. (a)

Explanation
"Hand-in-Hand 2007" is a joint anti-terrorism military training of Indo-China. This exercise took place in Yunnan province of China.

115. What does S & P 500 relate to?
(a) Supercomputer  (b) A new technique in e-business  
(c) A new technique in bridge building  (d) An index of stocks of large companies

Ans. (d)

Explanation
The S & P 500 is a stock market index containing the stocks of 500 Large-Cap Corporations, most of which are American. The Index is the most notable of the many indices owned and maintained by Standard & Poor's, a division of McGraw-Hill. S & P 500 is used in reference not only to the index, but also to the 500 companies that have their common stock included in the index. The S & P 500 index forms part of the broader S & P 1500 and S & P Global 1200 stock market indices.

Source: Manorama Year Book-2008

116. Match List-I with List-II and select the correct answer using the codes given below the Lists:

<table>
<thead>
<tr>
<th>List-I</th>
<th>List-II</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Person)</td>
<td>(Area)</td>
</tr>
<tr>
<td>A. K.P Singh</td>
<td>1. Banking</td>
</tr>
<tr>
<td>B. Vikram Pandit</td>
<td>2. Fiction Writing</td>
</tr>
<tr>
<td>C. Roopa Farooki</td>
<td>3. Retail Business</td>
</tr>
<tr>
<td>D. Kishore Biyani</td>
<td>4. Real estate</td>
</tr>
</tbody>
</table>

Ans. (A)
Codes:

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>(b)</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>(c)</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>(d)</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

**Ans. (d)**

**Explanation**

**K.P. Singh** : K.P. Singh (Kaushal Pal Singh) is the chairman of DLF group and has given a new form to the real estate business in India.

**Vikram Pandit** : Vikram Pandit is current CEO of city group. He was the President and Chief Operating Officer of the institutional securities and investment Banking group of Mosgen Stanlay for two decades. He is the India-born man.

**Roopa Farooki** : Roopa Farooki is a novelist and her first novel was 'Bitter Sweet' she was born in Lahore in Pakistan and brought up in London.

**Kishore Biyani** : Kishor Biyani is the Managing Director of Pantelion Retail India Ltd. This company is India’s leading retail company with across good, fashion, home solution and consumes electronics etc.

**Source** : Current Affairs

**117. Match List-I with List-II and select the correct answer using the codes given below the Lists :**

<table>
<thead>
<tr>
<th>List-I</th>
<th>List-II</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Organisation)</td>
<td>(Associated/Convention Person/Place/ Headquarters)</td>
</tr>
<tr>
<td>A. Amnesty International</td>
<td>1. Viskuli</td>
</tr>
<tr>
<td>B. Commonwealth of Independent States (CIS)</td>
<td>2. Paris</td>
</tr>
<tr>
<td>C. Danube Commission</td>
<td>3. Peter Benenson</td>
</tr>
<tr>
<td>D. European Space Agency</td>
<td>4. Belgrade Convention</td>
</tr>
</tbody>
</table>

**Codes**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>(b)</td>
<td>4</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>(c)</td>
<td>3</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>(d)</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

**Ans (a)**

**Explanation**

The correct match of List-I and List-II are as following : List-I List-II

<table>
<thead>
<tr>
<th>(Organisation)</th>
<th>(Associated/Convention Person/Place/ Headquarters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Amnesty International</td>
<td>3. Peter Benenson</td>
</tr>
<tr>
<td>B. Commonwealth of Independent States (CIS)</td>
<td>1. Viskuli</td>
</tr>
<tr>
<td>C. Danube Commission</td>
<td>4. Belgrade Convention</td>
</tr>
<tr>
<td>D. European Space Agency</td>
<td>2. Paris</td>
</tr>
</tbody>
</table>

Amnesty International was founded in London in July 1961 by English labour lawyer, Peter Benenson.

Commonwealth of Independent State (CIS) established — 8 December, 1991
objective — To coordinate inter commonwealth relations and to provide a mechanism for the orderly dissolution of the USSR.
Member — 12
headquarters — Kiravu (Belarus)
The convention regarding the regime of navigation on the Danube signed in Belgrade on 18 August, 1948 is the international legal instrument governing navigation on the Danube.
The European Space Agency (ESA) established in 1974, is an intergovernmental organisation dedicated to the exploration of space. Its head quarters is in Paris and currently with 17 member states. It has a staff of close to 2000 with an annual budget of 2.9 billion in 2007.

**Source** : Chronicle Year Book — 2008

> **118. Among the Indian languages, which one is spoken maximum in the world after Hindi ?**

(a) Telugu (b) Tamil (c) Bengali (d) Malayalam

**Ans. (c)**

**Explanation** : Hindi speaks constitute around 41.03% (422,048,642), followed by Bengali-8.11% (83,369,769) and Telugu-7.19% (74,002, 1856). Hence, the Indian language spoken maximum in the world after Hindi is Bengali.

**Source** : Manorama Year Book-2008

> **119. Kim Dae-Jung won the Nobel Prize for Peace. He is from which one of the following countries ?**

(a) Vietnam (b) Cambodia (c) South Korea (d) Japan

**Ans. (c)**

**Explanation**

Kim Dae-Jung was the former President of South Korea and won the Nobel Peace Prize in 2000.

**Source** : Manorama Year Book-2007

> **120. Ogaden region has been a source of conflict between which countries ?**

(a) Morocco and Algeria (b) Negeria and Cameroon (c) Angola and Zambia (d) Ethiopia and Somalia

**Ans. (d)**

**Explanation**

Ogaden region has been a source of conflict between Ethiopia and Somalia countries. Ogaden is the international name of the Somali regional state in Ethiopia.

> **121. Near which one of the following cities are Palitana temples located ?**

(a) Bhavnagar (b) Mount Abu (c) Nasik (d) Ujjain

**Ans. (a)**

**Explanation**

Palitana temples are situated in Gujarat, 51 km south-west of Bhavnagar. These are famous Jain temples. The temples are considered the most sacred pilgrimage place by the Jain community. These are more then 1300 temples located on
the Shatrunjaya hills, exquisitely carved in marble. The main temple is dedicated to the first Tirthankara, Lord Adinath (Rishabhdev).

122. Cristina Kirchner succeeded her husband to become President of a South American country. Which is that country?
(a) Chile  
(b) Argentina  
(c) Colombia  
(d) Venezuela

Ans. (b)

Explanation
Cristina Kirchner succeeded her husband to become President of a South America country named Argentina. She is the first female president of Argentina. She is the former IST lady. She became the President of election held in October 2007. She elected President by gaining more than 45% votes.

Source: Manorama Year Book - 2008

123. In the year 2007, an earthquake led to massive radioactive leakage in the largest nuclear plant in the world. In which country did it occur?
(a) Germany  
(b) Canada  
(c) Japan  
(d) USA

Ans. (c)

Explanation
Tokyo Electric Power Co.'s Kashiwazaki-kariwa nuclear power plant is the largest nuclear plant in the world. This plant leaked water containing radioactive materials from a reactor after a strong quake struck north-west Japan.

124. What is agent Orange?
(a) An ace spying group trained by the police in London  
(b) A weed-killing chemical used by the US Military in the Vietnam War  
(c) A technique used in the advanced railway safety procedure  
(d) A special chemical used in making alloy steel

Ans. (b)

Explanation
Agent orange is chemically mixture of two herbicides 2, 4-D and 2, 4, 5-T (2, 4, 5-Trichlorophenoxy acetic acid). 'Agent orange' and 'super orange' were the nick-names given to the herbicide and used by the United States military in its herbicidal orange warfare program during the Vietnam War. During the Vietnam War, an estimated 20 million gallons of Agent orange were deployed in South Vietnam.

Source: Chemistry—NCERT

125. The term 'Prisoner's Dilemma' is associated with which one of the following?
(a) A technique in glass manufacture  
(b) A term used in shipping industry  
(c) A situation under the game theory  
(d) Name of a supercomputer

Ans. (c)

Explanation
The Prisoner's Dilemma constitutes a problem in game theory. It was originally framed by mennis flood and melvin dresher working at RAND in 1950. Albert W. Tucker formalised the game with prison sentence payoffs and gave it the 'Prisoner's Dilemma' name (1952).

Source: Manorama Year Book - 2008

126. Which of the following pairs is/are correctly matched?

<table>
<thead>
<tr>
<th>Theory/Law</th>
<th>Associated Scientist</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Continental Drift</td>
<td>Edwin Hubble</td>
</tr>
<tr>
<td>2. Expansion of Universe</td>
<td>Alfred Wegener</td>
</tr>
<tr>
<td>3. Photoelectric Effect</td>
<td>Albert Einstein</td>
</tr>
</tbody>
</table>

Codes:
(a) 2 and 3  
(b) 3 only  
(c) 2 only  
(d) 1 only

Ans. (a)

Explanation
In 20th century physics two ideas stand out as being totally revolutionary: relativity and quantum theory. Although Einstein is best known for his theory of relativity, he also played a major role in developing quantum theory and it was his contribution to quantum theory explaining the photoelectric effect, which won Einstein his Nobel Prize in 1921.

In 1929, in the California, Mount Wilson observatory, an American astronomer by the name of Edwin Hubble made one of the greatest discoveries in the history of astronomy. While he observed the stars with a giant telescope, he found out that the light from them was shifted to the red end of the spectrum and that this shift was more pronounced the farther a star was from the earth.

In 1915, the German geologist and meteorologist Alfred Wegener proposed the theory of Expansion of universal so.

Source: Physics — NCERT

127. Match List-I With List-II and select the correct answer using the codes given below the Lists:

<table>
<thead>
<tr>
<th>List-I (Person)</th>
<th>List-II (Area)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Sabiyasachi Mukherjee</td>
<td>1. Microfinance loans</td>
</tr>
<tr>
<td>B. Aniruddha Bahal</td>
<td>2. Pharmaceuticals</td>
</tr>
<tr>
<td>C. Vikram Akula</td>
<td>3. Fashion designing</td>
</tr>
<tr>
<td>D. Yusuf Hamied</td>
<td>4. Investigative journalism</td>
</tr>
</tbody>
</table>

Codes:
(a) 1 2 3 4  
(b) 3 4 1 2  
(c) 1 4 3 2  
(d) 3 2 1 4

Ans. (b)

Explanation
Correct match list are given below:

<table>
<thead>
<tr>
<th>List-I (Person)</th>
<th>List-II (Area)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Sabiyasachi Mukherjee</td>
<td>3. Fashion designing</td>
</tr>
<tr>
<td>B. Aniruddha Bahal</td>
<td>4. Investigative journalism</td>
</tr>
</tbody>
</table>
C. Vikram Akula 1. Microfinance loans
D. Yusuf Hamid 2. Pharmaceuticals

Source: Chronicle Year Book - 2008

128. Ebrahim Alkazi is an eminent personality in which one of the following areas?
(a) Heart surgery
(b) Civil aviation
(c) Theatre training
(d) Transport engineering

Ans. (c)

Explanation
Ebrahim Alkazi is a famous Indian theatre director. He was the founding head of the India's Prime Theater Training Institute, National School of Drama, New Delhi. He has directed over 50 plays, including famous productions of Girish Karnad's "Thuglaq", Mohan Rakesh's "Ashta ka Ek Din" and Dharamvir Bharti's "Andha Yug". He has received awards including the Padma Shree and the Padma Bhushan for his contribution to theatre.

129. Bimbavati Devi is a well-known dancer of which type of dance?
(a) Manipuri
(b) Bharti Natayam
(c) Kuchipudi
(d) Odissi

Ans. (a)

Explanation
Bimbavati Devi is Manipuri dancer. She is the daughter of renowned classical Manipuri dancers, Guru Bipin Singh and Smt. Kalavati. Manipuri is a lyrical dance form from the eastern region of India. Although many forms of ritual, magical, community and religious dance were known to Manipur before the advent of Vaishnav faith in the 18th century, the dancer known as the Rasa dancer evolved only as a result of the interaction of the Vaishnav faith in the 18th century and the several highly developed forms of ritual and religious dances which were prevalent in the area. Jhaveri sister, Charu Malhotra and Bipin Singh is the famous Manipuri dancer.

Source: Manorama Year Book - 2008

130. How is Sarosh Zaiwalla well-known as?
(a) A leading theatre personality
(b) A leading wildlife photographer
(c) A leading international legal expert
(d) A leading orthopaedic surgeon

Ans. (c)

Explanation
Sarosh Zaiwalla is a member of the London Court of International Arbitration (LCIA), and the chartered institute of Arbitrators in London as well as a supporting member of the London Maritime Arbitration Association (LMEA). So, he is leading International legal experts.

131. Department of Border management is a Department of which one of the following Union Ministries?
(a) Ministry of Defence
(b) Ministry of Home Affairs
(c) Ministry of Shipping, Road Transport and Highways
(d) Ministry of Environment and Forests

Ans. (b)

Explanation
The Indian Government has a department of border management in the Ministry of Home Affairs (MHA) to pay focused attention to issues related to border management.

Source: India - 2008, Publication Division, Govt. of India

132. For which one of the following reforms was a Commission set up under the Chairmanship of Veerappa Moily by the Government of India?
(a) Police Reforms
(b) Tax Reforms
(c) Reforms in Technical Education
(d) Administrative Reforms

Ans. (d)

Explanation
Veerappa Moily was the Chairman of second administrative reforms commission. He was also former Chief Minister of Karnataka.

Source: Manorama Year Book - 2007

133. Elizabeth Hawley is well-known for her writings relating to which one of the following?
(a) Historical monuments in India
(b) Regional dances in India
(c) Himalayan expeditions
(d) Wildlife in India

Ans. (c)

Explanation
Elizabeth Hawley is an American former journalist and chronicler of Himalayan Expeditions.

Source: Current Affairs

134. Nobel Prize winning scientist James D. Watson is known for his work in which area?
(a) Metallurgy
(b) Meteorology
(c) Environmental protection
(d) Genetics

Ans. (d)

Explanation
Nobel prize winning scientist James D. Watson was the discoverer of the DNA molecules. The initials DNA and the elegant model of the double helix, became known around the world. So did Watson and Crick. Their discovery revolutionized the study of biology and genetics, making possible the recombinant DNA techniques used by today's biotechnology Industry. James Watson became a senior research fellow in Biology at the California Institute of Technology, before returning to Cambridge in 1955. In recognition of their discovery, Francis Crick and James Watson shared the 1962 Nobel Prize for Physiology and Medicine with Maurice Wilkins.

135. Who among the following has been the captain of the Indian team in Cricket Test Matches for the maximum number of times?
(a) Sunil Gavaskar
(b) Mansar Ali Khan Pataudi

Ans. (a)

Explanation
Sunil Gavaskar was the captain of the Indian team in Cricket Test Matches for the maximum number of times.
(c) Saurav Ganguly  
(d) Mohammad Azharuddin

**Explanation**

Saurav Ganguly, the former Captain Indian Cricket Team has led Indian Cricket Test Matches Team for the maximum number of times. Following cricketers and number of Test Matches led by him are given below:

<table>
<thead>
<tr>
<th>Name of Cricketer</th>
<th>Number of times to lead the teams</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Saurav Ganguly</td>
<td>49 times</td>
</tr>
<tr>
<td>(ii) Mohammad Azharuddin</td>
<td>47 times</td>
</tr>
<tr>
<td>(iii) Sunil Gavaskar</td>
<td>47 times</td>
</tr>
<tr>
<td>(iv) Mansur Ali Khan</td>
<td>40 times</td>
</tr>
</tbody>
</table>

**>136. In the context of the Indian Defence, what is ‘Dhruv’?**

(a) Aircraft-carrying warship  
(b) Missile-carrying submarine  
(c) Advanced light helicopter  
(d) Intercontinental ballistic missile

**Explanation**

Dhruv is a multi-role helicopter developed and manufactured by Hindustan Aeronautics Limited. It is currently being supplied to the Indian Force and a civilian variant is also available. The type has been exported to Nepal and Israel, and is currently being considered by Bolivia and Peru. Specialised military variants include anti-submarine warfare machine and helicopter gunships.

**Source:** India 2007: Publication Division, Govt. of India

**>137. Starting with the Australian Open Lawn Tennis Tournament, which one of the following is the correct chronological order of the other three major Lawn Tennis Tournaments?**

(a) French Open—US Open—Wimbledon  
(b) French Open—Wimbledon—US Open  
(c) Wimbledon—US Open—French Open  
(d) Wimbledon—French Open—US Open

**Explanation**

Following is the correct chronological order of the all major Lawn Tennis Tournaments:

(i) Australian Open—January month of every year  
(ii) French Open—May/June  
(iii) Wimbledon—June/July  
(iv) US Open—August/September

**Source:** Manorama Year Book - 2007

**>138. Match List-I with List-II and select the correct answer using the codes given below the Lists:**

<table>
<thead>
<tr>
<th>List-I (Service/Agency)</th>
<th>List-II (Country)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Foreign Intelligence Service</td>
<td>1. Israel</td>
</tr>
<tr>
<td>B. Ministry of State Security</td>
<td>2. Britain</td>
</tr>
<tr>
<td>C. Secret Intelligence Service</td>
<td>3. China</td>
</tr>
<tr>
<td>D. The Mossad</td>
<td>4. Russia</td>
</tr>
</tbody>
</table>

**Codes:**

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>(b)</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>(c)</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>(d)</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

**Ans. (c)**

**Explanation**

Foreign Intelligence Service is Russia's primary external intelligence agency. The Ministry of State Security (MSS) is the security agency of people’s Republic of China. Britain's Secret Intelligence Service (SIS) also known as MI6. The Mossad is the national intelligence agency of the State of Israel.

**>139. Rangarajan has been actively involved in the Pan-Asian Commission addressing to which one of the following issues?**

(a) Promotion of tourism in the Asian region  
(b) Impact of HIV/AIDS in the Asian region  
(c) Promotion of free trade in the Asian region  
(d) Higher technical education in the universities in the Asian region

**Ans. (b)**

**Explanation**

Rangarajan has been actively involved in the Pan-Asian Commission addressing to impact of HIV/AIDS in the Asian region.

**>140. Which one of the following is correct in respect of Indian football team’s performance in the Olympic Games?**

(a) India has never participated in the Olympic Football Tournament  
(b) India played only in the first round  
(c) India entered only up to the quarter finals  
(d) India entered the semi finals

**Ans. (d)**

**Explanation**

In 1956 Olympic Games Football Tournament, India entered the semi final. This olympic held in Melbourne (Australia). The olympic games were revived in 1896, when the first modern olympic games were held in Athens.

**>141. Norman Ernest Borlaug who is regarded as the father of the Green Revolution in India is from which country?**

(a) United States of America  
(b) Mexico  
(c) Australia  
(d) New Zealand

**Ans. (a)**

**Explanation**

Norman Ernest Borlaug of United States of America is called the Father of Green Revolution (1966-67) India; however, he served since long in Mexico as agricultural scientist. During the middle of sixties, Indian Agricultural Scientists developed a number of new high yielding varieties of wheat by processing wheat seeds imported from Mexico. These varieties were having production potentialities of 60-65 quintals per hectare. A similar improvement in variety of rice was also observed. As a result of introducing these high yielding varieties a true
142. What is the number of spokes in the Dharmachakra in the National Flag of India?

(a) 16
(b) 18
(c) 22
(d) 24


Explanation
The Constituent Assembly of India adopted the design of the National Flag on 22 July, 1947. The Indian Flag code regulates the use and display of it. The Indian National Flag is a horizontal tricolour of dark green at the bottom, white in the middle and deep saffron (Kesaria) at the top in equal proportion. The ratio of width to length is 2:3. A navy blue wheel with 24 spokes is in the centre of the white band. The design of the wheel is taken from the abacus of the Sarnath Lion capital of Ashoka. The wheel represents the chakra.


143. From which one of the following did India buy the Barak anti-missile defence systems?

(a) Israel
(b) France
(c) Russia
(d) USA


Explanation
India bought the Barak anti-missile defence systems from Israel. Barak anti-missile defence system is firstly commissioned in India on INS Virat.

144. Selene-1, the lunar orbiter mission belongs to which one of the following?

(a) China
(b) European Union
(c) Japan
(d) USA

Source: Science & Technology—NCERT.

Explanation
Selene – 1 is the first joint lunar project between the national space development agency of Japan and the institute of space and Astronautical science. Selene means in ancient Greek goddess of the moon. The Japanese also hope to launch a lunar orbiter in 2002 or 2003. Lunar-A will drop two penetrators on the moon’s surface, where they will monitor seismic activity for an entire year, relaying their data to the orbiter. Japan’s Hiten spacecraft was launched in 1990 and later injected the tiny probe Hagoromo into orbit around the moon.

Source: Science & Technology—NCERT.

145. Recently, the manuscripts of which one of the following have been included in the UNESCO’s Memory of World Register?

(a) Abhidhamma Pitaka
(b) Mahabharata
(c) Ramayana
(d) Rig-Veda


Explanation
The UNESCO’s memory of the world programme is an international initiative launched in 1992 in order to guard against collective amnesia calling upon the preservation of the valuable archive holding and library collections all over the world ensuring their wide dissemination. The memory of the world register lists documentary heritage which has been identified by International Advisory Committee in its meetings. Recently, in 2006, Rig-Veda included in the UNESCO’s Memory of World Register.


146. Consider the following statements:

1. Orange Prize is awarded to a work of published fiction in English by a woman.
2. Pulitzer Prize is awarded by the Commonwealth Foundation to a citizen of any Commonwealth country for any literary work in English.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2


Explanation
The Orange Broadband Prize for Fiction is one of the United Kingdom’s most prestigious literary prizes. This prize awarded annually for the best original full-length novel by a female author of any nationality, written in English and published in the UK in the preceding year. The Pulitzer Prize, is an American award regarded as the highest national honor in print journalism, literary achievements and musical composition. It is administered by Columbia University in New York city. Ironically, Pulitzer along with William Hearst was one of the originators of yellow journalism.


147. Which one of the following Union Ministries is implementing the Biodiesel Mission (as Nodal Ministry)?

(a) Ministry of Agriculture
(b) Ministry of Science and Technology
(c) Ministry of New and Renewable Energy
(d) Ministry of Rural Development


Explanation
National Mission of Bio-diesel the Planning Commission had submitted its report in April, 2003 for the recommendation on plantation of Jatropha Curcas (Bio-diesel plant/Ratanjot) to, which, the Ministry of Rural Development has been identified as the Nodal Ministry. The production of bio-diesel from Jatropha seeds and Ponogamia seeds is being experimented with in several states such as Chattisgarh, Tamil Nadu and Andhra Pradesh. The Government has been rather sluggish in its attitude towards the framing of the Bio-diesel policy.


148. Who among the following translated the Autobiography of Madam Curie in Hindi?

(a) Atal Bihari Vajpayee
(b) Lal Bahadur Shastri
(c) Choudhary Charan Singh
(d) Gobind Vallabh Pant


Explanation
The Autobiography of Madam Curie was translated into Hindi by Atal Bihari Vajpayee.

Lal Bahadur Shastri (1904-1966) was became the Prime Minister of India from May, 1964 to his death on 11 January, 1966. He was conferred 'Bharat Ratna' posthumously. He was a martyr for the cause of peace between India and Pakistan at Tashkand. Lal Bahadur Shastri took a leading role in “Saii Syahgraah” which was intensified by 1930. He also advised people not to pay land revenue and taxes to the British government. He was sent to prison for two and half years for doing so. Going to prison became a blessing in disguise for him. He spent time reading number of books. He become familiar with the works of western philosopher, revolutionaries and social reformers. He translated the autobiography of Madam Curie, a French scientist who discovered Radium, into Hindi.

Source: Chronicle Year Book-2008

(c) J. B. Kriplani
(d) Rajendra Prasad

Source: Freedom Struggle in India—Bipin Chandra

150. Which one of the following was a journal brought out by Abdul Kalam Azad?
(a) Al-Hilal
(b) Comrade
(c) The Indian Sociologist
(d) Zamindar

Source: Modern India—B.L. Grover

Explaination

Acharya Kriplani was a Gandhian all his life. He had his education in Karachi. J.B. Kriplani was professor of English and History at Muzaffarpur College in Bihar for five years from 1912 to 1917.

Source: Modern India—B.L. Grover

149. Who among the following Gandhian followers was a teacher by profession?
(a) A. N. Sinha
(b) Braj Kishore Prasad