

- 1 A Buddhist Council during the reign of Kanishka was held at: (a) Magadha (b) Patliputra (c) Kashmir (d) Rajgriha What is the name of Magasthenes book? (a) Arthashashtra (b) Rigveda (d) Indica (c) Purana (a) Bihar Who has written the 'Harshcharita'? (c) Gujarat (a) Kalidasa (b) Banabhatta (c) Vishnugupta (d) Parimalgupta Who was the writer of 'Mudrakshasa'? (c) 1828 A.D. (a) Vishakhadatta **(b)** Kautilya (c) Banabhatta (d) Kalhana **5** Where was Mahaveer Swami born? (a) Kundagram (b) Patliputra (c) Magadha (d) Vaishali 6 Who was the first ruler of the Slave dynasty? (a) Iltutmish (b) Qutubuddin Aibak (d) Balban (c) Razia 7 Who was the ruler of Devagiri at the time of Alauddin Khilji's invasion? (a) Ramchandar Dev (b) Prataprudra Dev (a) Warren Hastings (c) Malik Kafur (d) Rana Ratan Singh
 - (b) Head of State Department (c) An Officer in charge of public morals (d) Officer of Correspondence Department

8 In the Mughal administration 'Muhatsib' was:

- 9 A common feature of all Bhakti Saints was that they (a) Composed their verses in the language understood
 - by their followers (b) Rejected the authority of the priestly class
 - (c) Encouraged women to go to temples
 - (d) Encouraged idol worship
- 10 Where did Mahatma Buddha's Mahaparinirvana take place?
 - (a) Lumbini
- (b) Bodh Gaya
- (c) Kushinagar

(a) Military Officer

- (d) Kapilvastu
- 11 At which place did Mahatma Buddha give his first 'Dharmachakra Pravartan'?
 - (a) Lumbini
- (b) Sarnath
- (c) Patliputra
- (d) Vaishali
- 12 Which was the first capital of Magadha?
 - (a) Patliputra
- (b) Vaishali
- (c) Girivaraja (Rajgriha)
- (d) Champa

- 13 Which dynasty did rule over Magadha after Nanda
 - (a) Maurya (b) Shunga (c) Gupta
 - (d) Kushana
- 14 The famous centre of education in Maurya age was:
 - (a) Vaishali (b) Nalanda (c) Taxila (d) Ujjain
- 15 Which region of India was known for the cultivation of poppy plant during the British rule?
 - (b) South India
 - (d) Assam
- 16 Raja Rammohan Roy established Brahmo Samaj in:
 - (a) 1816 A.D.
- **(b)** 1820 A.D.
- (d) 1830 A.D.
- 'Satyartha Prakash' was written by:
 - (a) Raja Rammohan Roy
- (b) Mahatma Gandhi
- (c) Swami Vivekananda
- (d) Swami Dayanand Saraswati
- 18 The 'Anushilan Samiti' was:
 - (a) Dedicated to the upliftment of women
 - (b) Promoting widow remarriage
 - (c) Interested in labour welfare
 - (d) A revolutionary organisation
- 19 'Ring fence' policy was associated with:
- (b) Lord Dalhousie
- (c) Henry Lawrence
- (d) Lord Hastings

- 20 The first President of 'All India Trade Union Congress' was:
 - (a) V. V. Giri
- (b) S. A. Dange
- (c) Jawaharlal Nehru
- (d) Lala Lajpat Rai
- 21 The Prime Minister of England at time of Quit India Movement was:
 - (a) Chamberlain
- **(b)** Churchill
- (c) Clement Attlee
- (d) Macdonald
- Name of the Deoband scholar who played significant role in the freedom movement is:
 - (a) Abdul Kalam Azad
- (b) Mohammad Ali Jinnah
- (c) Badruddin Tyabji
- (d) Chirag Ali
- 23 Who was Sardamani?
 - (a) Wife of Raja Rammohan Roy
 - (b) Wife of Ramkrishna Parmahansa
 - (c) Mother of Vivekananda
 - (d) Daughter of Keshab Chandra Sen
- 24 When was the new Enfield Rifle with greased cartridges introduced in the British Indian Army?
 - (a) November, 1856
- **(b)** December, 1856
- (c) January, 1857
- (d) February, 1857

in Bombay? (a) 1920 (b) 1925 (c)	Union Congress established 1 1929 (d) 1935	September, 1928:	cialist Republican Army in
Who founded the 'Amrit la' (a) Girish Chandra Ghosh	Bazar Patrika'?	(a) Barindernath Ghosh(c) Jyotindra Nath	(b) Ajay Ghosh(d) Bhagat Singh
(b) Harish Chandra Mukhe	rjee	Who presided over the	
(c) S. N. Banerjee (d) Sisir Kumar Ghosh		National Congress in 1947? (a) J. B. Kriplani	(b) Rajendra Prasad
27 Who said that "Congre		(c) Abul Kalam Azad	(d) Jawaharlal Nehru
inspired by the people, nor of (a) Lord Dufferin	devised or planned by them"? (b) Sir Syad Ahmad	At which place in Bihan National Congress of 1922	
(c) Lord Curzon	(d) Lala Lajpat Rai	(a) Haripura (c) Gaya	(b) Patna(d) Ramgarh
Qandhi-Irwin Pact?	ant role in the signing of	(c) Gaya 142 Nanavati Commission wa	
(a) Motilal Nehru	(b) Madan Mohan Malaviya	(a) 1984 (b) 1994 (c)	c) 1999 (d) 2002
(c) Tej Bahadur Sapru	(d) Chintamani	(a) Shiv Raj Patil	Sabha is: (b) Somnath Chatterjee
poison) made?		(c) Manohar Joshi	(d) None of them
(a) Ethyl alcohol(c) Potassium cyanide	(b) Methyl isocyanate(d) Ethyl isocyanate	(a) Jaswant Singh	a is: (b) Yaswant Sinha
30 Who propounded the doc	• • •	(c) P. Chidambaram	(d) None of them
(a) Mahatma Gandhi (c) Bal Gangadhar Tilak	(b) Bipin Chandra Pal(d) Aurobindo Ghosh	Which of the following February, 2005?	
Which of the following mouthpiece of the policies		(a) Bihar (b) Haryana (c) State Assembly Elections (c)	
(a) New India	(b) Leader	(a) One phase	(b) Four phases
(c) Young India	(d) Free Press Journal	(c) Two phases The final phase of election	(d) None of these on in February, 2005 in Bihar
Cripps Mission and Lord W	Vavell?	was for:	·
(a) Abul Kalam Azad (c) J.B. Kriplani	(b) Jawahar Lal Nehru(d) C. Rajagopalachari	(a) 93 seats(c) 73 seats	(b) 83 seats(d) None of these
33 How many seats were	given to depressed classes	Justice U. C. Banerjee Co.	
under Communal Award as (a) 74 and 79 respectively		(a) Probe the 2002 Godhra(b) Probe the Sikh riots	incident
(c) 78 and 80 respectively		(c) Probe fodder scam(d) None of these	
Who among the following Treasurer for a long period	~ .	Who is the Chief Election	
(a) G.D. Birla	(b) Jamanalal Bajaj	(a) J.M. Lyngdoh (c) S.L. Sakdher	(b) M.S. Gill(d) None of them
(c) J.R.D.Tata 35 Who was the leader of t	(d) Walchand Hirachand	50 The function of bureaucr	, ,
1899-1900?		(a) To implement the gover (b) To run administration	nment policies
(a) Sidhu (c) Birsa Munda	(b) Buda Bhagat(d) Sambhudan	(c) To help ministers	
36 Who presided over the	()	(d) All of these 51 Which of the following	ng is given the nower to
Kishan Sabha? (a) Swami Sahajananda	(b) Indulal Yajnik	implement the Fundamenta	al Rights by the Constitution?
(c) N. N. Ranga	(d) P. C. Joshi	(a) All Courts in India(b) The Parliament	
Which British comman Santhals in 1855?	der was defeated by the	(c) The President	the High Courts
(a) Captain Nek Feville	(b) Lt. Bastain	(d) The Supreme Court and 52 By which of the following	-
(c) Major Burrough When did Kunwar Singh	(d) Colonel White	be impeached?	
in Bihar, breathe his last?		(a) By the Lok Sabha(b) By the Parliament	
(a) 10 th April, 1858 (c) 9 th May, 1858	(b) 17 th June, 1858 (d) 20 th June, 1858	(c) By the Chief Justice of I(d) By the Prime Minister	ndia
` '	• • •	())	

Vhich of the following subjects lies in the Concurrent List?	According to 2001 census the urban population is:	e state having the highest
(a) Agriculture (b) Education) Maharashtra
(c) Police (d) Defence	, ,	l) Kerala
54) Who was the President of the Committee on whose	70 Israel has common borders v	•
recommendation the Panchayati Raj was established	(a) Lebanon, Syria, Jordan and	
in India?	(b) Lebanon, Syria, Turkey and	
(a) Ashok Mehta (b) Dr. Iqbal Narayan	(c) Lebanon, Turkey, Jordan ar	
(c) Balwant Rai Mehta (d) Jeevraj Mehta	(d) Lebanon, Syria, Iraq and E	
55 The statewise allocation of seats in the Lok Sabha is	71 Which one of the following	
based on the 1971 census. Upto which year does this	nomy of selected countries is	
remain intact? (a) 2031 (b) 2026 (c) 2021 (d) 2011	(a) U.S.A. accounts for more	
	production of maize but only 3	3% of the world's export.
56 The Panchayati Raj System was first started in India in the states of Rajasthan and:	(b) No country produces and	exports more wool than
(a) Haryana (b) Gujarat	Australia.	
(c) Uttar Pradesh (d) Andhra Pradesh	(c) India figures among the le	eading producers of dairy
57 How many members are nominated by the President	products in the world.	ahaan manulation Nave
in the Rajya Sabha?	(d) With 4% of the world's Zealand accounts for two-thirds	
(a) 2 (b) 10 (c) 12 (d) 15	sixth of the wool exports of the	
58 Which one of the following takes the decision to	72 Correlate List-I (Railways)	
conduct Panchayat Elections?	Places) and select the correct	
(a) The Central Government(b) The State Government	given below the lists.	O
(c) The District Judge	List I (Pailways) Li	ist II (Composting Places)
(d) The Election Commission		ist-II (Connecting Places)
59 Which of the following Articles of the Constitution of	(A) European (1)) Paris to Istanbul
India is related with liberty of press?	transcontinental Railway	
(a) Article 19 (b) Article 20		
(c) Article 21 (d) Article 22	(B) Trans-Andean (2)) Leningrad to Vladivostok
Which of the following Constitutional Amendment	Railway	
Act was said to be a Mini Constitution? (a) 42 nd (b) 44 th (c) 46 th (d) 50 th	(C) Trans-Siberian (3)	
	Railway	Valparasio
(a) The Chief Minister of Jammu and Kashmir?	(D) Orient Express (4)) Paris to Warsaw
(b) The Chief Justice of High Court of Jammu and	Codes:	
Kashmir	A B C D	
(c) The Prime Minister of India	(a) 3 2 4 1	
(d) The President of India	(b) 4 3 2 1	
62 When was the Planning Commission established?	(c) 2 3 1 4 (d) 1 4 3 2	
(a) 10 th March, 1950 (b) 15 th March, 1950 (c) 16 th March, 1951 (d) 20 th March, 1950	73 Brass is made from:	
) Nickel and Zinc
(a) Union List (b) State List) Copper and Zinc
(c) Concurrent List (d) Not specified in any list	74 Which chemical substance	is used for making rat
64 The high tide in the ocean is caused by:	poison?	O .
(a) Earthquake (b) Sun	, ,) Methyl isocyanate
(c) Stars (d) Moon	(c) Potassium cyanide (d) None of these
65 The magnetic needle points to the:	75 For wheat cultivation which	
(a) East (b) West (c) North (d) Sky	, ,) Potassium
66 Burning of hydrogen produces:		l) Iron
(a) Oxygen (b) Silver (c) Gold (d) Iron	Which metal can be used for	. 1
67 Myoglobin contains the metal:) Iron I) Aluminium
(a) Copper (b) Silver (c) Gold (d) Iron		
(a) Petroleum (b) Earth	(a) Depends on the mass (b)) Depends on its length
(c) A tree (d) Chemical reaction of acids		Depends on temperature
(ii) Stofffed Toucher of Miles	, , 1	, 1

78 People get skin burns in a swimming pool due to:

- (a) Infrared ray
- (b) Chlorine
- (c) Heat
- (d) Ultraviolet ray

79 When electrical energy is converted into motion:

- (a) There is no heat loss
- (b) Heat loss is 50 per cent
- (c) Heat loss is 30 per cent (d) Heat loss is 80 per cent
- **80** Fermentation of sugar leads to:
 - (a) Ethyl alcohol
- (b) Methyl alcohol
- (c) Acetic acid
- (d) Chlorophyll

81 A ridge, 64,000 km long and 2,000 km to 24,00 km wide, runs down the middle of the North and South Atlantic Ocean basins, into the Indian Ocean basin, that passes between Australia and Antarctica to the South-Pacific Ocean basin. The ridge is:

- (a) Socotra-Lakshadweep
- (b) Pacific-Antarctic ridge
- (c) Dolphin-Challenger ridge (d) Mid-Oceanic ridge

82 The smallest day occurs on:

- (a) 23rd December
- (b) 23rd September
- (c) 23rd June
- (d) 23rd April

83 The solar eclipse occurs when the:

- (a) Moon is in the centre
- (b) Earth is in the centre
- (c) Sun is in the centre
- (d) Sun, Moon and the Earth are in a straight line but Jupiter is not on this line

84 Light is made of seven colours. What is the method of separating the colours?

- (a) The colours can be separated by a prism
- (b) The colours can be separated by a filter
- (c) The colours can be separated by plants
- (d) The colours cannot be separated

85 Cooling is done by:

- (a) Flow of water
- (b) Release of compressed gas
- (c) Cooking gas
- (d) Melting the solid

86 White light in a tube is produced by:

- (a) Heating a copper wire
- **(b)** Heating a fibre
- (c) Exciting the atoms
- (d) Oscillating the molecules

87 Gold is dissolved in:

- (a) Sulphuric acid
- **(b)** Nitric acid
- (c) Mixture of sulphuric and nitric acids
- (d) Hydrochloric acid

88 Acid rain is caused by:

- (a) Industries
- (b) Petrol
- (c) Burning coal
- (d) Wood

Which state has a lower literacy rate than the country's literacy rate according to 2001 census?

- (a) Maharashtra
- (b) Gujarat
- (c) Orissa
- (d) West Bengal

Mhich one of the following statements about the 2004 Indian Ocean earthquake and the resulting Tsunami is not correct?

(a) The earthquake originated due to the slipping of about 1,200 km of fault line by 15 m along the subduction zone where the India Plate subducts the Burma plate at the Sunda Trench.

- **(b)** The resulting tsunami devastated the shores ranging from the coast of Indonesia as far as the east coast of Africa, some 8,500 km away from the epicentre.
- **(c)** As per the current estimates the quake-generated tsunami killed more than 50 lakh people, in addition to unaccounted dead bodies swept out to the sea.
- **(d)** Bangladesh had very few casualties because the quake-fault line was in a nearly north-south orientation, the greatest strength of the tsunami waves was in an east-west direction.

21 Consider the following statements egarding the formation of landforms in India.

- **1.** Structurally, the Meghalaya plateau in an extended part of the Deccan plateau.
- **2.** The valley of Kashmir was formed in a Synclinorium.
- 3. The Gangetic plain was formed in a foredeep.
- **4.** The Himalayas originated as a result of triangular convergence of the Indian plate, the European plate, and the Chinese plate.

Which of these statements are correct?

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

Which one of the following groups of districts in Bihar indicated the correct descending order of population density as per the 2001 census?

- (a) Darbhanga, Samastipur, Siwan, Saran
- (b) Siwan, Saran, Darbhanga, Samastipur
- (c) Saran, Darbhanga, Samastipur, Siwan
- (d) Darbhanga, Saran, Samastipur, Siwan

93 Some iron and Steel plants have been planned along the Western coast of India. What is the major reason for this locational shift of this industry?

- (a) Increased nuclear power generation in the Western Coastal region
- **(b)** Occurrence of high grade iron-ore deposits in Goa and parts of Madhya Pradesh and the comparative case of exporting steel from here
- **(c)** Decline in international demand for Indian iron ore from the Western Coastal region
- (d) Adoption of sponge iron technology

Consider the following statements and select the correct answer using the codes given below:

Assertion (A): Until the end of eighties of the last century, the Indian industries showed a clear attitude of structural shift from consumer goods to basic and capital goods industries.

Reason (R): The demand for consumer goods decline during the period.

Codes:

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- **(b)** Both (A) and (R) are 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

95 What is true about the second green revolution in India?

1. It aims at further increasing the production of wheat and rice in areas already benefited from Green Revolution.

OSWAAL BPSC Prelims 20 previous years solved papers

- 2. It aims at extending seed-water-fertilizer technology to areas which hitherto could not benefit from Green Revolution.
- 3. It aims at increasing the yields of crops other than those using the Green Revolution in the beginning.
- 4. It aims at integrating cropping with animal husbandry, social forestry and fishing.

Select the correct answer from the codes given below.

- (a) 1 and 2 (b) 2 and 3 (c) 2 and 4 (d) 1 and 4
- **96** Which one of the following statements about energy production and consumption in India is not correct?
 - (a) During the last decade energy production in India has shown a declining trend.
 - (b) The per capita energy consumption in the world is the lowest in India.
 - (c) The non-conventional sources of energy contribute less than one percent of the total commercial energy produced in India.
 - (d) Industry is the major energy consuming sector in India.
- **97** Consider the following statements about the population characteristics of India.
 - 1. During 1991-2001 decade, the population grew at the rate of nearly 21%.
 - 2. In 2001, the gap between male and female literacy has widened compared to 1991.
 - 3. As per the 2001 census there are 35 large cities in the country which accommodate nearly 48% of total urban population.
 - 4. The 1991 census reflected a decline in the number of unproductive consumers.

Which of these statement are correct?

- (a) 1 and 2 (b) 2 and 3 (c) 1 and 4 (d) 2, 3 and 4
- **98** Rivers belonging to which one of the following groups from the boundary between Bihar and Uttar Pradesh?
 - (a) Kamala, Son, and Baghmati
 - (b) Budi Gandak, Kosi, and Ganga
 - (c) Karmanasha, Gandak, and Ghaghra
 - (d) North Koel and Punpun
- 99 Which state ensures the maximum production of coffee in India?
 - (a) Maharashtra
- (b) Karnataka
- (c) Tamil Nadu
- (d) Kerala
- 100 Correlate List-I (Natural Hazards) with List-II (Regions) and select the correct answer using the codes given below.

List-I (Natural Hazards)		List-II (Regions)	
(A)	Flood	(1)	Himalayan foothill zone
(B)	Earthquakes	(2)	Jharkhand and Northern Orissa
(C)	Droughts	(3)	Plains of Uttar Pradesh and Bihar
(D)	Cyclones	(4)	Mid-Eastern India

Codes:

	A	В	C	D
(a)	3	1	2	4
(b)	3	1	4	2
(c)	2	3	1	4
(d)	4	2	3	1

101 Correlate List-I (Agro Climatic Zones) with List-II (Percentage of Bihar's Area) and select the correct answer using the codes given below.

Lis	List-I (Agro Climatic Zones)		st-II (Percentage f Bihar's Area)
(A)	North and North-Eastern Bihar Plains	(1)	29.87%
(B)	South Bihar Plains	(2)	23.71%
(C)	Chotanagpur Plateau	(3)	26.14%
(D)	Chotanagpur Hills	(4)	20.28%

Codes:

	Α	В	C	D
(a)	3	4	1	2
(b)	1	2	3	4
(c)	2	1	4	3
(d)	4	3	2	1

102 Which is the 'year of great divide' in the history of population growth in India?

- (a) 1951
 - **(b)** 1991
- (c) 2001
- (d) 1921
- 103 Consider the following statements regarding the vivid geographical aspects of Bihar.
 - 1. Agriculture contributes nearly 67% to Bihar's domestic product.
 - 2. Silk industry in Bihar provides self-employment to over 1,50,000 people.
 - 3. About 47 lac acres of land in Bihar get flooded every year, while 10 lac acres remain permanently waterlogged.
 - 4. The 85-90% of Bihar's rural households have less than 5 acres of land of their own.

Which of these statements are correct?

- (a) 2 and 4 (b) 1 and 2 (c) 2 and 3 (d) 3 and 4
- 104 Correlate List-I (Characteristics of National Highways) with List-II (Number of National Highways) and select the correct answer using the codes given below the lists.

	List-I		List-II
(A)	NH that passes through Bihar	(1)	NH-No. 12
(B)	NH that does not pass through Bihar	(2)	NH-No. 87
(C)	NH having maximum length in Bihar	(3)	NH-No. 2
(D)	Proposed NH not to serve Bihar	(4)	NH-No. 31

Codes:

	Α	В	C	D
(a)	3	1	4	2
(b)	4	2	3	1
(c)	1	3	2	4
(4)	2	4	1	2

105 Which state has the lowest literacy rate according to	(a) Service Sector (b) Agriculture
2001 census report? (a) Arunachal Pradesh (b) Madhya Pradesh	(c) Industrial Sector (d) Trade Sector
(c) Bihar (d) Haryana	The outline of Second Five Year Plan was made by:
106 According to year 2002, birth rate of Bihar (per 1000) is:	(a) B. N. Gadgil (b) V. K. R. V. Rao
(a) 7.9 (b) 30.9 (c) 20.9 (d) 26.6	(c) P. C. Mahalanobis (d) C. N. Gadgil
107 Coal reserves in Bihar on January 1, 2003 are (in	NABARD was established in the:
million tonnes):	(a) Fourth Five-Year Plan (b) Fifth Five-Year Plan
(a) 260 (b) 360 (c) 160 (d) 210	(c) Sixth Five-Year Plan (d) Eighth Five-Year Plan
Percentage share of agricultural labour in the total	When development in economy takes place, the share
workers of Bihar is: (a) 40.18 (b) 48.18 (c) 29.17 (d) 46.18	of tertiary sector in National Income:
	(a) First falls and then rises (b) First rises and then falls
(a) Madhya Pradesh (b) Bihar	(c) Keeps on increasing (d) Remains constant
(c) Orissa (d) Jammu & Kashmir	From the following which one is not a tool of Fiscal
110 Which of the following is not factor contribution to	Policy? (a) Taxation (b) Public Expenditure
international relations?	(c) Interest Rate (d) Public Debt
(a) Technological advancement	Which of the following direct taxes gives maximum
(b) Spirit of aggressive nationalism	net revenue to the Government?
(c) Development of international trade(d) Development of industries	(a) Corporate tax (b) Income tax
	(c) Wealth tax (d) Gift tax
The main idea behind 'globalisation' is: (a) Attaining friendship among nations	Which state has the lower per capita income in India
(b) Solving international disputes	at current price?
(c) working together with the entire international	(a) Bihar (b) Orissa (c) Rajasthan (d) Gujarat
community with a shared common perspective	
(d) None of these	123 A cyclist covers distances of 15 km, 20 km and 25 km with respective speeds 15km/h, 25 km/h and 15 km/h.
Who is called the 'Father of Indian Economic Reform'?	His average speed was:
(a) Jawaharlala Nehru (b) Indira Gandhi	(a) 30 km/h (b) 20 km/h
(c) Manmohan Singh (d) P. V. Narsimha Rao	(c) 22.5 km/h (d) 17.3 km/h
Consider the following statement about India's recent	The maximum value of $Z = 50x + 15y$ subject to the
export-import trade:	constraints $5x + y \le 100$, $x + y \le 60$, $x \ge 0$ and $y \ge 0$ is:
1. The share of textile sector in India's export is 21% and involvery and or naments 17%.	(a) 1500 (b) 1250 (c) 900 (d) 1000
jewellery and ornaments 17%.Western Europe and North America together account	125 Health Department knows that in a large population
for 53% of India's exports and 40% of its imports.	20% individual suffer from a particular disease.
3. Latin America, Sub-Saharan African and Middle East	The probability that 2 individuals in a sample of 5 individuals selected from this population will be
Countries offer the most potential markets for Indian	suffering from the disease is:
export trade.	(a) 0.2548 (b) 0.0512 (c) 0.2048 (d) 0.0204
4. India's share in world exports is a little over 2%.	126 The value of k so that points $(1, 2, 3)$, $(k, 0, 4)$ and $(-2, 4, 2)$
Which of these statements are correct? (a) 1 and 2 (b) 1, 2 and 4	are collinear is:
(c) 3 and 4 (d) 1, 2 and 3	(a) 4 (b) 3 (c) 1 (d) 2
\(\frac{114}{114}\) National income estimates in India are prepared by:	127 If $f(x) = \frac{1}{1-x}$ then the value of $f[f(f(x))]$ is:
(a) Planning Commission (b) RBI	$\frac{1}{1-x} \ln f(x) = \frac{1}{1-x} \text{ then the value of } f(y) f(x) f(x) = \frac{1}{1-x}$
(c) Finance Ministry (d) Central Statistics Office	(a) $\frac{1}{(b)x^2}$ (b) $(1-x)$ (d) $(x-x)$
Nearly 5% of the total population of Bihar survives in	(a) $\frac{1}{(1-x)^2}$ (b) x^2 (c) $(1-x)$ (d) x
absolute poverty because:	128 Let the consumer price index with respect to a base
1. Bihar lacks in natural resources, both existing and	year be 325. The current year wage of a worker, having
potential.	₹ 240 as wage in the base year in order to maintain the
2. Bihar has the fastest total fertility rate in India.	same standard of living, will be:
Bihar has very unfavourable agro-climatic conditions.	(a) $\stackrel{?}{_{\sim}} 780$ (b) $\stackrel{?}{_{\sim}} 1000$ (c) $\stackrel{?}{_{\sim}} 1560$ (d) $\stackrel{?}{_{\sim}} 1500$

4. Bihar lacks in quality infrastructure and business-

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

friendly environment.

Which of these reasons are correct?

2x - y + z = 6 and x + y + 2z = 7 is: (a) $\frac{\pi}{2}$ (b) $\frac{\pi}{4}$ (c) $\frac{\pi}{3}$ (d) $\frac{\pi}{6}$

The acute angle between the normals to the planes

OSWAAL BPSC F	Prelims 20 previous year	rs solved papers	
[130] ${}^{n}C_{1} + {}^{n}C_{2} + \dots {}^{n}C_{n} = $ (a) 6 (b) 8 (c) 4 [131] The demand function of a consider where <i>x</i> is the number of units of price. The value of <i>p</i> , which mate (a) 4 (b) 8 (c) 6 [132] The market value of a share value of ₹ 10 is ₹ 25. The composition of 10%. The dividend on 150 will be: (a) ₹ 3,750 (b) ₹ 15,000 (c) ₹ [133] Who is the Secretary General expression of 10%.	255, then value of n is: 4 (d) 10 mmodity is $x = \frac{1}{3}(24 - 2p)$, demanded and p is per unit eximizes the revenue is: 6 (d) 5 e of a company with face apany declared a dividend 20 shares of the company $(57,500)$ (d) $(5,500)$	rs solved papers 140 Who represented India in November, 2004? (a) The President (c) The Prime Minister 141 When was the 13 th No Countries' meet held in K (a) January, 2001 (c) February, 2003 142 Who represented India Summit, held in October, (a) The Prime Minister (c) The Vice-President 143 Elections for the President (a) October 9, 2004 (c) September 8, 2004	 (b) The Foreign Minister (d) The Defence Minister n-Aligned Movement (NAM) (uala Lumpur? (b) January, 2002 (d) None of these in the Second India-ASEAN 2003? (b) The President (d) None of them nt of Afghanistan were held on (b) November 10, 2004
(c) Kurt Waldheim, Austria (d) 134 In November 2002, meeting Atlantic Treaty Orgnisation (N (a) New Delhi (b) (c) Paris (d) 135 The delegation of both the Heled by the speaker which visit 2003 consisted of: (a) 22 members (b)	1) None of them 25 of the leaders of North NATO) was held at: 26 o) Prague 27 None of these 28 ouses of Indian Parliament 28 ded China in early January, 29 12 members	(a) Buta Singh (c) Ved Marwah The Prime Minister of I (a) State government (b) Central government (c) Both State and Central (d) None of these	nand is: (b) Syed Sibtey Razi (d) T. V. Rajeshwar india is the head of:
(a) Nuclear Fission (b) (c) Oxidation Reactions (d) Malaysian Prime Minister v. (a) December 19-23, 2004 (b) (c) December 20-24, 2003 (d)	o) Nuclear Fusion I) Reduction Reactions isited India, on: o) November 18-22, 2004 I) January 5-9, 2005	The Head of State of guest in the Republic Day (a) China (c) Nepal The Group-7 rich country was held in: (a) March, 2003 (c) May, 2003	(b) Bhutan (d) Sri Lanka
(c) December 1, 2004 (d 139 Palestinian leader is: (a) Yasser Arafat (b	emergency on: 1) January 1, 2005 2) None of these 3) Mahmoud Abbas 3) None of them	(a) Jiang Zemin (b) Mao Zedong (c) Mao Zedong (d) Goa Ministry was dismit (a) Governor (c) President of India	(b) Hu Jintao(d) None of them

ANSWERS WITH EXPLANATION

1 Option (c) is correct.

Explanation: During the reign of the Kushan ruler Kanishka, the Fourth Buddhist Council was held at Kundalavan (Kashmir) in the 72 AD.

- It was presided over by Vasumitra and Ashvaghosha was the vice-president.
- At this time Buddhism was clearly divided into two sects, Hinayana and Mahayana.

2 Option (d) is correct.

Explanation: Indica is a book written by the ancient Greek historian Megasthenes.

 Megasthenes was appointed as the ambassador of the Greek king Seleucus Nicator to the court of the Mauryan emperor Chandragupta Maurya in Pataliputra (presentday Patna).

■ During his stay in India, he wrote Indica, which was based on his observations and conversations with Indian scholars, philosophers, and officials.

3 Option (b) is correct.

Explanation: Harshacharita was composed by the court poet of Harshvardhan, Banabhatta.

- Harshacharita, is a biography of the Kannauj ruler Harshavardhan.
- It is written in Sanskrit and is considered to be one of the finest examples of classical Indian literature.
- The book is divided into three sections, each focusing on a particular phase of Harsha's life and reign.
- The first section describes Harsha's early life and ascension to the throne, the second covers his military campaigns and conquests, and the third details his later years as a Buddhist patron and scholar.

Explanation:

- 'Mudrarakshasa' is a Sanskrit play written by Vishakhadatta in the 6th century CE.
- The play is set during the time of the Nanda Empire and the rise of Chandragupta Maurya.
- It depicts the political intrigues and power struggles of the time, including the conflict between the Nandas and Chandragupta's forces led by Chanakya.

5 Option (a) is correct.

Explanation: Mahavir Swami was born in 540 BC in a Kshatriya family at a place called Jnatrika Gana in Vaishali district (Bihar).

- His father Siddhartha was the head of the Jnatrika Gana of the Vajji Sangha.
- His mother Trishala was the sister of King Chetak of Vaishali.
- He became the 24th tirthankara (Jain spiritual teacher)
- He emphasized the equality of all living beings and questioned the authority of the Vedas.

6 Option (b) is correct.

Explanation: Qutbuddin Aibak was the founder of the slave dynasty. He ruled from 1206 AD to 1210 AD.

- Qutbuddin Aibak was a slave of Mohammed Ghori.
- Aibak constructed the Quwwat-ul-Islam mosque in Delhi to commemorate Islam's victory in India.
- He also constructed the Adhai Din Ka Jhopra mosque in Aimer.
- Aibak started the construction of the Qutub Minar in Delhi, which was dedicated to the Sufi Saint Khwaja Qutbuddin Bakhtiyar Kaki.

7 Option (a) is correct.

Explanation: Ramchandra Dev was the ruler of Devagiri (present-day Daulatabad, Maharashtra) in South India during Alauddin Khilji's attack.

- In 1307 AD, Alauddin sent Malik Kafur along with Alap Khan, the governor of Gujarat, to defeat Ramchandra Deva.
- Malik Kafur fought Ram Chandra Dev and captured Elichpur.
- After his his son Shankar Dev declared independence from the Sultanate, and Malik Kafur attacked Devagiri and killed Shankar Dev.

8 Option (c) is correct.

Explanation: In the Mughal administration, Muhtasib was the officer who took care of the character and conduct of the subjects (people).

- Its work was to implement the orders of the Prophet and suppress the rules and regulations against Islam.
- Preventing those who act contrary to 'Sharia', protecting the general public from being disloyal, monitoring public morality, banning the use of alcohol and cannabis, banning gambling, getting temples demolished etc.

9 Option (a) is correct.

Explanation: A common feature among all the Bhakti saints was that they wrote their speech in the same language that their devotees (follower) understood.

- The Bhakti movement in India originated in South India between the 11th and 12th centuries.
- Tamil Vaishnava Alvars and Shaivite Nayanar saints popularized the Bhakti movement in South India.
- Ramananda promoted the Bhakti movement in North India. He was a disciple of Vaishnava Acharya Ramanuja.

10 Option (c) is correct.

Explanation: Mahatma Buddha's 'Mahaparinirvana' (death) took place in Kushinagar (present Kasia village of Uttar Pradesh) at the age of 80 in 483 BC.

Mahatma Buddha reached Pava, the capital of the Mallas, while preaching himself.

He stayed in the Amravatika of a blacksmith named Chund.

He was provided with 'Sukaramaddava' to eat, it made him 'Raktatisar' and suffered terrible pain.

After this agony, he reached Kushinagar. Here in 483 BC he left his body at the age of 80.

Option (b) is correct.

Explanation: Buddha gave his first sermon at Sarnath (Rishipatnam) to five monks who had stayed with him during his penance.

- Mahatma Buddha gave his first 'Dharmachakra Pravartan' at Sarnath, Uttar Pradesh, India.
- It is considered a significant event in the history of Buddhism as it marks the beginning of the Buddha's teaching career, where he delivered his first sermon to his five disciples.

12 Option (c) is correct.

Explanation: The first capital of Magadh was Girivraj, also known as Rajagriha, which was located in present-day Rajgir in Bihar.

- The credit for its establishment is given to Bimbisara, the first historical ruler of Magadha.
- It was the capital of Magadh during the time of the Haryanka dynasty.
- Later Udayana shifted the capital from Girivraja to Pataliputra.

\backslash 13 Option (a) is correct.

Explanation: The dynasty that ruled over Magadh after the Nanda dynasty was the Maurya dynasty.

- Chandragupta Maurya, with the help of the politically astute Brahmin Kautilya, overthrew Dhana Nanda in 321 BC to establish the Maurya dynasty.
- Dhana Nanda, one of the Nanda rulers, was unpopular due to his harsh tax system.
- The Maurya dynasty became one of the largest and most powerful empires in ancient India, with a vast territory that extended from the Oxus valley to the Kaveri delta.

Option (c) is correct.

Explanation: Taxila was the most famous center of education in the Maurya period.

- It was the capital of the Gandhara kingdom.
- Maurya Emperor Chandragupta Maurya and Acharya Chanakya received education there.

- It was known for its exceptional quality of education, and its alumni included some of the most renowned scholars and philosophers of ancient India.
- Taxila was a renowned centre of learning that attracted students and scholars from various parts of the world, including Greece, China and Central Asia.

Explanation: During British rule, the regions of India that were known for the cultivation of the poppy plant were mainly Bihar, Uttar Pradesh and Madhya Pradesh.

■ The opium produced from these regions was primarily used for export to China, where it had a huge demand for medicinal and recreational purposes.

16 Option (c) is correct.

Explanation: Raja Ram Mohan Roy founded Brahmo Sabha in August 1828, which was later renamed Brahmo Samaj.

- The main aim of the Brahmo Samaj was the worship of the eternal God, and it was against priesthood, rituals and sacrifices.
- In 1866, the Brahmo Samaj split into two factions: the Brahmo Samaj of India, led by Keshub Chandra Sen, and the Adi Brahmo Samaj, led by Debendranath Tagore.

17 Option (d) is correct.

Explanation: 'Satyarth Prakash' was written by Swami Dayanand Saraswati, the founder of the Arya Samaj.

- Through this book, he put the importance of Vedas in front of the world.
- Dayanand founded the Arya Samaj in Bombay in 1875 for the reformation of Hinduism.
- It advocates for social and religious reforms, including the abolition of the caste system, child marriage, and the education of women.

18 Option (d) is correct.

Explanation:

- Anushilan Samiti was a revolutionary organization founded by Pramathanath Mitra on March 24, 1902 in Calcutta.
- The movement was led by Barindra Kumar Ghosh, who was the younger brother of Sri Aurobindo Ghosh.
- Their activities were of two types-killing tyrannical officers, traitors and informers and collecting money by dacoity to buy weapons.

19 Option (a) is correct.

Explanation: The Ring Fence policy was introduced by Warren Hastings between 1765 - 1813.

- The policy involved creating buffer zones around Company territories by defending neighboring borders.
- The neighboring states were required to maintain subsidiary forces organized and equipped by Company officers.
- The cost of maintaining these forces was borne by the rulers of these states.

Option (d) is correct.

Explanation: The All India Trade Union Congress first president was Lala Lajpat Rai.

- The All India Trade Union Congress (AITUC) was established on October 31, 1920, in Bombay.
- Other founding leaders included Bal Gangadhar Tilak, N. M. Joshi, B. P. Wadia, Diwan Chaman Lall, Lala Lajpat Rai, and Joseph Baptista.
- During the 1920s, British communists had significant control over the AITUC.

21 Option (b) is correct.

Explanation: The Prime Minister of England at the time of Quit India Movement (1942) was Winston Churchill (1940-1945).

- The Quit India Movement was launched by Mahatma Gandhi on August 8, 1942.
- Gandhi gave the call for "Do or Die" in his speech at the Gowalia Tank Maidan.

22 Option (a) is correct.

Explanation: Maulana Abul Kalam Azad was associated with the Deoband movement.

- The Deoband Movement was founded in 1866 at the Darul Uloom in the Saharanpur district by Muhammad Qasim Nanautavi and Rashid Ahmad Gangohi.
- The aim of this movement was to spread the pure teachings of the Quran and Hadith among the Muslims and to oppose foreign rule.
- The movement was characterized by its strict orthodoxy and differed from the Wahhabi movement in its opposition to Sayyid Ahmed's doctrinal and political views.

Option (b) is correct.

Explanation: Shardamani was the name of the wife of Ramakrishna Paramhans. Ramakrishna was a Hindu mystic and saint who lived in the 19th century and was known for his spiritual teachings and experiences.

24 Option (c) is correct.

Explanation: In January 1857, the government decided to replace the old iron-clad Brown Bress with the new Enfield Rifle.

The fat of cow and pig was used in its cartridges.

To load the rifle it was necessary to tear off the paper cover with the teeth before inserting the cartridge.

The rumor offended the religious beliefs of both Hindus and Muslims, as cows are sacred to Hindus and pigs are taboo to Muslims.

The cartridge issue was the immediate cause of the Revolt of 1857.

25 Option (a) is correct.

Explanation: The All India Trade Union Congress (AITUC) was founded in 1920.

- Lala Lajpat Rai was the first president of this organization.
- It played an important role in the Indian independence movement by organizing workers and advocating for workers' rights.

Explanation: The Amrita Bazar Patrika was started in 1868 by Shishir Kumar Ghosh, Motilal Ghosh, and Tushar Kanti Ghosh. It was a daily newspaper initially published in Bengali and later in English.

27 Option (d) is correct.

Explanation: Lala Lajpat Rai said "the congress movement was neither inspired by the people nor devised or planned by them".

About Lala Lajpat Rai:

Born: January 28, 1865

Place of Birth: Dhudike, Punjab

Political Association: Indian National Congress, Arya

Samaj

Publications: The Story of My Deportation (1908), Arya Samaj (1915), The United States of America: A Hindu's Impressions (1916), Young India (1916), England's Debt to India (1917).

28 Option (c) is correct.

Explanation: The Gandhi-Irwin Pact was concluded on March 5, 1931 with the cooperation of Tej Bahadur Sarpu and M. R. Jayakar.

- The pact was signed by Gandhi on behalf of the Congress and Lord Irwin on behalf of the British Indian government.
- The pact called for the release of all political prisoners except those guilty of violence and the suspension of the salt satyagraha.
- In exchange, the Congress agreed to participate in the second round table conference and to end the Civil Disobedience Movement.

29 Option (c) is correct.

Explanation: Potassium cyanide is a white granular solid with bitter almond odour. It is similar in appearance to sugar. Potassium cyanide is used extract metals from ore. Its common uses are rat poison, metal plating and semiconductor manufacturing.

Option (d) is correct.

Explanation: The concept of passive resistance was advocated by Aurobindo Ghosh, who was against the Moderates' theory of "politics of petition" in India.

■ He proposes the concept of "Passive Resistance", with the connected ideas of self-development and self-help. According to Aurobindo, through this concept, Indians could effectively dispute every facet of colonial rule, without engaging in armed rebellion. While elaborating on the scope of these principles he mentioned the interconnected resourses of Swadeshi and boycott, nationalization of education, defense and indigenous judicial systems, etc.

Option (b) is correct.

Explanation: Pandit Madan Mohan Malaviya was the publisher of the newspaper "The Leader".

- The 'Leader' newspaper was mainly propagating the policies of the liberals.
- Pandit Madan Mohan Malaviya, also known as Mahamana, was a moderate nationalist from Allahabad who

served as the President of the Indian National Congress (INC) for three terms.

■ In 1916, he founded the Banaras Hindu University and is also credited with introducing scouting in India.

32 Option (a) is correct.

Explanation: Abul Kalam Azad, had talks with both Cripps Mission and Lord Wavell.

- Abul Kalam Azad became the President of the Congress in the Ramgarh session of 1940 and continued to preside over the Congress till 1945-46.
- He held talks with Cripps Mission in 1942 and Lord Wavell in 1945.

Option (b) is correct.

Explanation: According to the Poona Pact, the Harijans' 71 seats in the Provincial Legislative Assemblies were increased to 147.

The Poona Pact was signed on September 24, 1932.

The pact was signed by Dr. B. R. Ambedkar on behalf of the Depressed Classes, Madan Mohan Malviya on behalf of the Hindus, and Gandhi as a means to end the fast he was undertaking in jail.

Under the Communal Award of 1932, provision was made for reserved seats for the Depressed Classes in the Central Legislature.

34 Option (b) is correct.

Explanation: Jamnalal Bajaj was the treasurer of the All India Congress Committee (AICC) for a long time and went to jail in 1930.

■ He renounced the title of Rai Bahadur in protest against the British government towards India.

\35) Option (c) is correct.

Explanation: Birsa Munda was the leader of the Munda rebellion in 1899-1900.

- Munda rebellion is also called the Ulgulan rebellion.
- The Munda Rebellion led by Birsa Munda was an important uprising of the 19th century that took place in the South region of Ranchi from 1899-1900.
- The rebellion was launched against British rule, and the Ulgulan was one of the best tribal rebellions in Bihar.
- The movement aimed to all alien elements and reconstruct its impeccable symbol.

36 Option (a) is correct.

Explanation: It was presided over by Swami Sahajanand Saraswati.

- The All India Kisan Sabha, also referred to as the Akhil Bharatiya Kisan Sabha, was founded in 1936 by Sahajanand Saraswati during the Lucknow Session of the Indian National Congress.
- It was presided over by Swami Sahajanand Saraswati, and N. G. Ranga became the general secretary.
- The Sabha had several prominent members, such as Indulal Yagnik, Sohan Singh Bhakna, Z. A. Ahmed, Pandit Karyanand Sharma, Pandit Yamuna Karjee, Pandit Yadunandan (Jadunandan) Sharma, Rahul Sankrityayan, P. Sundarayya, and Ram Manohar Lohia.

Explanation: The Santhals defeated the English commander Major Burrough.

- The Santhal rebellion began on June 30, 1855, at Bhaganodih.
- The leaders of the Santhal rebellion of 1855 were Siddha and Kanhu. The area between Bhagalpur to Rajmahal was known as Daman-e-Koh. Major Burrough led a small contingent of forces to suppress the rebellion but was defeated at Pirpaini.

38 No option is correct. (Bonus)

Explanation: None of the option is correct.

- Kunwar Singh, the leader of the revolt of 1857 in Bihar, breathed his last on April 26, 1858, in Jagdishpur, located in present-day Bhojpur district of Bihar, India.
- Kunwar Singh was one of the prominent leaders of the Indian Rebellion of 1857 and played an important role in mobilizing people against the British rule in Bihar and neighboring regions.

Option (a) is correct.

Explanation: Barindernath Ghosh had joined from Bihar.

- The 'Hindustan Republican Army' (founded in 1924) was renamed the 'Hindustan Socialist Republican Army' in September 1928 at a meeting of young revolutionaries at the Ferozeshah Kotla Maidan in Delhi.
- Revolutionaries like Bhagat Singh of Punjab, Jatindranath and Ajay Ghosh of Uttar Pradesh, Barindernath Ghosh of Bihar etc participated in this meeting.

40 Option (b) is correct.

Explanation: The Delhi session of the Indian National Congress in 1947 was presided over by Dr. Rajendra Prasad.

- Rajendra Prasad was the first President of India, in office from 1950 to 1962. Prasad was imprisoned by British authorities during the Salt Satyagraha of 1931 and the Quit India movement of 1942.
- He was elected as the President of the Indian National Congress during the Bombay session in October 1934.

(4) Option (c) is correct.

Explanation: In December 1922, the thirty-seven session of the Indian National Congress was held at Gaya in Bihar.

- It was presided over by C. R. Das.
- The Swaraj Party was established in this session.
- The Gaya session was significant as it was the first Congress session after the Non-Cooperation Movement was suspended, and it provided a platform for Congress leaders to discuss the future course of action.

42 Option (d) is correct.

Explanation: The Nanavati-Mehta Commission was constituted by the Government of Gujarat to investigate the Godhra train burning incident of 27 February 2002.

- The commission was tasked with probing various aspects related to the incident, later it was extended to investigate the 2002 Gujarat riots as well.
- The NDA government also constituted the Nanavati Commission in the year 2000 to investigate the 1984 anti-Sikh riots.

(43) Option (b) is correct.

Explanation: Somnath Chatterjee was the Speaker of the Lok Sabha (from June 4, 2004 to May 10, 2009) as per the year the asked question.

- Present Speaker of the Lok Sabha is Om Birla.
- Om Birla is representing the Kota-Bundi constituency of Rajasthan.

44 Option (c) is correct.

Explanation: According to the examination year, the Finance Minister of India was P. Chidambaram.

- P. Chidambaram held the charge of Finance Minister in Prime Minister Manmohan Singh's government.
- Presently the Finance Minister of India is Nirmala
- She was appointed as the Finance Minister on 31 May 2019, succeeding Arun Jaitley.

(45) Option (d) is correct.

Explanation: Legislative assembly elections were not held in Punjab.

 Assembly elections were held in only three states of India, Bihar, Haryana and Jharkhand, during February 2005.

46 Option (d) is correct.

Explanation: Elections to the Bihar Legislative Assembly were held in three phases during February 2005.

- The 2020 Bihar Legislative Assembly elections were conducted in three phases.
- The Bihar assembly elections began on October 28 and the counting of votes took place on November 10.

47 Option (a) is correct.

Explanation: In Bihar, the last phase of elections was held in February 2005 for 93 seats. Bihar Assembly elections were held twice in the year 2005. There was a fractured verdict in February 2005 Assembly Election. Since no government could be formed in Bihar, fresh elections were held in October-November the same year.

(48) Option (a) is correct.

Explanation: The commission was set up to investigate the Godhra incident and the communal riots that occurred in 2002.

■ The Godhra incident refers to the burning of the Sabarmati Express train near Godhra station on February 27, 2002, which resulted in the death of 59 people.

49 Option (d) is correct.

Explanation: The Chief Election Commissioner of India in 2005 was T. S. Krishnamurthy.

- Presently Rajeev Kumar is the 25th Chief Election Commissioner of India.
- V. S. Ramadevi was the first woman to serve as an Election Commissioner of India.
- Sukumar Sen was appointed as the first Chief Election Commissioner of India.
- The appointment of the Chief Election Commissioner and the Election Commissioners is made by the President of India.
- The Governor of the respective state appoints the State Election Commissioner.

Explanation: All of the given options are correct.

- Bureaucracy is the permanent executive of the country, whose main function is to formulate and implement the policies of the government, conduct the work of administration and assist the popular ministers in the work of the general public.
- Bureaucrats are the heads of various government departments, boards etc. and look after the government work.

51 Option (d) is correct.

Explanation: The power to enforce fundamental rights has been given to the Supreme Court (Art. 32) and the High Courts (Art. 226) by the Constitution.

- Five types of writs can be issued by the Supreme Court and the High Courts for the protection of the fundamental rights of the citizens Habeas Corpus, Mandamus, Prohibition, Certiorari and Quo Warranto.
- The judiciary acts as a watchdog to ensure that the rights guaranteed under the Constitution are protected and enforced.

52 Option (b) is correct.

Explanation: Impeachment against the President can be initiated in either house of the Parliament.

- Article 61 of the Constitution lays down the procedure for impeachment of the President.
- For impeachment, Art. 61 specifies only one ground and that is violation of the constitution.
- The charges must be signed by at least one-fourth of the members of the House (who framed the charges), and the President must be given 14 days' notice.
- After the impeachment resolution is passed by a twothirds majority of the total membership of that House, it is sent to the other House, which is responsible for investigating the charges.
- If the charges against the President of India are upheld by the other House of the Parliament and a resolution for the President's impeachment is passed by a two-thirds majority of the total membership, the President is removed from office on the date when the resolution is passed.

53 Option (b) is correct.

Explanation: By the 42nd Constitutional Amendment Act of 1976, the subject of education in the State List has been transferred to the Concurrent List.

- Both the Parliament and state legislatures have the authority to make laws regarding matters mentioned in the Concurrent List.
- The 42nd Amendment Act of 1976 added five subjects to the Concurrent List from the State List, including education, forests, weights and measures, protection of wild animals and birds and administration of justice.

54 Option (c) is correct.

Explanation: The Panchayati Raj system was established on the recommendation of Balwant Rai Mehta Committee.

■ The Balwant Rai Mehta Committee, established in 1957, recommended the establishment of a "democratic decentralization" scheme that ultimately became known as Panchayati Raj in India.

■ Rajasthan became the first state to establish Panchayati Raj in 1959, inaugurating it in Nagaur district.

55 Option (b) is correct.

Explanation: At present, the state-wise allocation of seats in the Lok Sabha is based on the 1971 census. This determination will remain till the year 2026.

- The distribution of seats in Parliament is based on the 1971 census, according to provisions in the Indian Constitution.
- The 42nd amendment Act in 1976 decided that the population taken into consideration for the next 25 years would be the number in the 1971 Census.

56 Option (d) is correct.

Explanation: Andhra Pradesh is the second state to implement Panchayati Raj after Rajasthan.

- The Panchayati Raj system was first implemented in India on the recommendation of Balwant Rai Mehta Committee.
- Panchayati Raj was first inaugurated on October 2, 1959 by the then Prime Minister Pt. Nehru in Nagaur district of Rajasthan.
- After this it was adopted by Andhra Pradesh and other states.

57 Option (c) is correct.

Explanation: The President of India can nominate 12 members to the Rajya Sabha, the Upper House of the Indian Parliament.

- The maximum number of members of Rajya Sabha can be 250.
- It consists of representatives of 238 states and union territories and 12 nominated by the President.
- These nominated members are chosen for their expertise in various fields, including literature, science, art, and social service.

58 Option (b) is correct.

Explanation: The decision to hold elections to the Panchayats is taken by the state government.

- The state legislature has the power to make provisions related to all matters concerning elections to the Panchayats.
- The state election commission has the responsibility for overseeing the preparation of electoral rolls and conducting all elections to the Panchayats in India.
- The state election commissioner is appointed by the governor, and can only be removed from office in the same manner and on the same grounds as a judge.

59 Option (a) is correct.

Explanation: Freedom of the press or media is a fundamental right guaranteed by the Constitution of India under Article 19(1)(a).

- This right ensures the freedom of speech and expression, which includes the freedom of the press to report and comment on matters of public interest.
- Freedom of the press promotes democracy by enabling independent journalism and allowing people to voice their opinions and criticisms of the government and its actions.

Explanation:

- The Constitution (42nd Amendment) Act, 1976, is often referred to as a "Mini Constitution" because of the extensive changes it made to the Indian Constitution.
- The act was passed during the period of Emergency and included a number of controversial provisions that significantly expanded the powers of the central government and limited the rights of individuals.
- With this amendment, the words secular, socialist and integrity were added to the Preamble.

61 Option (d) is correct.

Explanation: The President is responsible for administering every Union Territory, and he/she does this by appointing an administrator.

- The Indian Constitution has dedicated Articles 239 to 241 to the governance of Union Territories.
- The designation of an administrator can be specified by the President and may include Lieutenant Governor, Chief Commissioner, or Administrator.
- The Parliament of India has the power to make laws on any subject listed in the Union, State, or Concurrent lists, pertaining to Union Territories.

62 Option (b) is correct.

Explanation: The Planning Commission was established on 15th March 1950 by a resolution of the Government of India.

- It was an extra-constitutional and non-statutory body that acted as an advisory body to the Government of India on various economic development matters.
- The Prime Minister of India served as the chairman of the Planning Commission and an ex-officio member of the body.
- The Planning Commission was disbanded in 2014, and replaced by the National Institution for Transforming India (NITI) Aayog in 2015.

63 Option (c) is correct.

Explanation: The subject of Economic Planning is listed in the Concurrent List of the 7th Schedule of the Indian Constitution.

- This means that both the central government and state governments have the power to make laws on economic planning and related matters.
- The Concurrent List contains subjects on which both the central and state governments can legislate.

64 Option (d) is correct.

Explanation: Forces that contribute to tides are called tidal constituents. The Earth's rotation is a tidal constituent. The major tidal constituent is the moon's gravitational pull on the Earth. The closer objects are, the greater the gravitational force is between them. Although the sun and moon both exert gravitational force on the Earth, the moon's pull is stronger because the moon is much closer to the Earth than the sun is.

■ The rising of the sea water and moving towards the sea shore is called tide and falling back towards the sea is called ebb.

65 Option (c) is correct.

Explanation: The magnetic needle in a compass points towards the Earth's magnetic north pole.

- A magnetic needle is a small magnet.
- Its end which points towards the north is called the North Pole and the one which points towards the South is called the South Pole.
- A magnetic needle is used in a compass.

66 No option is correct. (Bonus)

67 Option (d) is correct.

Explanation: Myoglobin contains iron as a metal ion in its structure.

- Iron is a crucial component of myoglobin and is responsible for its ability to bind to oxygen.
- Myoglobin is a protein found in the muscle cells of animals and acts as an oxygen storage unit, providing oxygen to working muscles.

68 Option (c) is correct.

Explanation: Aspirin is obtained from a tree.

- Aspirin, also known as acetylsalicylic acid, is a synthetic drug that is obtained from salicylic acid.
- Salicylic acid is a naturally occurring compound found in plants such as willow trees, meadow-sweet, and wintergreen.
- It is used for the relief of both antipyretic and analgesic types of pain.

69 Option (b) is correct.

Explanation: According to Census 2001, the state in India with the highest urban population is Maharashtra.

Total urban population in different states as per 2001 census

States	Population
Maharashtra	41019734 lakhs
Uttar Pradesh	34512629 lakhs
Tamil Nadu	27241553 lakhs
Kerala	8267135 lakhs

Maharashtra is the state with 14.37% urban population of the country.

■ According to Census 2011, Goa is the most urbanized state in the country.

70 Option (a) is correct.

Explanation: Israel shares land borders with four countries - Lebanon, Syria, Jordan, and Egypt. The country also has a coastline along the eastern Mediterranean Sea to the west.

The boundary of Israel is as follows-

North - Lebanon

Northwest - Syria

East – Jordan and the Palestinian Autonomous Region South west – Egypt and the Gaza Strip

West – Mediterranean Sea

Southeast - Red Sea

Explanation: U.S.A. accounts for 30.18% of the world's production of maize and 37.2% of the world's export.

72 Option (b) is correct.

Explanation:

List-I (Railway)	List-II (Connecting place)
European Transconti- nental Railway	Paris to Warsaw Train
Trans-Andean Railway	Buenos Aires to Valparaíso
Trans-Siberian Railway	Leningrad to Vladivostok
Orient Express	Paris to Istanbul

73 Option (d) is correct.

Explanation: Brass is, an alloy of copper and zinc.

- Brass is a popular metal and has many applications because it has good corrosion resistance, is easily machinable, and has a relatively low melting point.
- It is commonly used for decorative purposes, such as in musical instruments, ornaments, and household hardware, as well as for more functional applications, such as in plumbing fixtures, electrical connectors, and valves.

74 Option (c) is correct.

Explanation: Potassium cyanide is a white granular solid with bitter almond odur. It is similar in appearance to sugar. Potassium cyanide is used extract metals from ore. Its common uses are rat poison, metal plating and semiconductor manufacturing.

75 Option (a) is correct.

Explanation: The most common type of fertilizer used for wheat cultivation is nitrogen.

- Plants require 16 nutrients. The elements carbon and oxygen are obtained from the atmosphere, while hydrogen is obtained from water. The remaining 13 nutrients required for growth are obtained from the soil.
- But, out of these, the requirement of Nitrogen, Phosphorus, Calcium (NPK in ratio of 4:2:1) is more for wheat cultivation.

76 Option (a) is correct.

Explanation: To generate electricity from nuclear power, uranium is used as fuel in a reactor.

- Uranium, Plutonium and Thorium are used in nuclear fission.
- The process of using uranium as fuel is called nuclear fission, where the uranium atoms are split into smaller atoms, releasing a large amount of energy in the process.
- This energy is then used to heat water, which generates steam that drives a turbine to produce electricity.

77 Option (b) is correct.

Explanation: The time-period of a pendulum is dependent on its length and the acceleration due to gravity.

■ $T = 2\pi\sqrt{L/g}$, where T = time period, l is length, and g is gravitational force.

- This formula implies that the time-period of a pendulum is directly proportional to the square root of its length and inversely proportional to the square root of the acceleration due to gravity.
- Therefore, a pendulum with a longer length will have a longer time-period, while a pendulum in a stronger gravitational field will have a shorter time-period.

78 Option (b) is correct.

Explanation: People can get skin burns in a swimming pool due to the chemical imbalance of the water, particularly due to an excessive amount of chlorine.

■ Chlorine is commonly used in swimming pools to kill bacteria and other harmful micro-organisms, but if the concentration of chlorine in the water is too high, it can cause skin irritation and burns.

79 Option (c) is correct.

Explanation: About 70% of the electrical energy is converted into motion, and remaining 30% is lost.

- When electrical energy is converted into motion, there is always some amount of heat loss due to various factors such as friction, resistance and inefficiencies in the conversion process.
- The amount of heat loss can vary depending on the specific system and its efficiency.

80 Option (a) is correct.

Explanation: Ethyl alcohol is produced by the fermentation of cane sugar.

- In the case of sugar fermentation, the micro-organisms break down the sugar molecules into alcohol and carbon dioxide through a series of chemical reactions.
- Fermentation of sugar can also be used in other applications, such as in the production of biofuels, pharmaceuticals, and food additives.

81 Option (d) is correct.

Explanation: The ridge is called the Mid-Oceanic ridge, which is the longest mountain range in the world, stretching over 64,000 km (40,000 miles) from the Arctic Ocean to the southernmost tip of the Atlantic Ocean.

■ The Mid-Atlantic Ridge is formed by the separation of two tectonic plates, the North American Plate and the Eurasian Plate, on one side and the South American Plate and the African Plate on the other.

82 Option (a) is correct.

Explanation: The shortest day is on 21/23 December.

- The winter solstice, usually on December 22, is the longest night and shortest day of the year in the Northern Hemisphere, while the Southern Hemisphere, in contrast, has the shortest night and longest day.
- The longest day is on 21st June while on 21st March and 23rd September day and night are equal.

83 Option (a) is correct.

Explanation: When Moon comes between the Earth and the Sun, that situation is called a solar eclipse.

- This can only occur during a new moon, when the Moon is positioned directly between the Sun and the Earth.
- There are two types of solar eclipses: partial and total.

■ In a partial eclipse, the Moon only partially covers the Sun, while in a total eclipse, the Moon completely blocks the Sun, creating a dark shadow on a specific area of the Earth's surface.

84 Option (a) is correct.

Explanation: The method of separating the colours of light is called dispersion, and it can be achieved through the use of a prism or diffraction grating.

- White light is made up of seven colors of light.
- Due to the different wavelengths on passing through the prism, these seven colors of light separate to form a spectrum.

85 Option (b) is correct.

Explanation: The room can be cooled by the release of compressed gas.

- Compressed gas is used in the air cooler, due to which a room or other place is cooled.
- Common compressed gases are: propane, nitrogen, chlorine, helium, and oxygen.

86 Option (b) is correct.

Explanation: White light is produced when the filament is heated.

To start electric discharge in the argon gas and mercury vapor filled in the tube, it is necessary that both the filaments have become very hot.

87 Option (c) is correct.

Explanation: Aqua regia is a mixture of nitric acid and hydrochloric acid or concentrated sulphuric acid that can dissolve gold.

It is one of the few substances that can dissolve gold and is commonly used in analytical chemistry and metallurgy.

88 Option (a) is correct.

Explanation: Acid rain is caused by sulphur dioxide and nitrous oxide. It mainly comes out of factories.

- Acid rain is a type of precipitation, including rain, fog, mist, snow, and hail, that has a lower pH than normal, usually less than 5.6.
- Acid rain, also known as acid deposition, is caused by the emission of pollutants such as sulfur dioxide (SO_2) and nitrogen oxides (NOx) into the atmosphere, which are transported by wind and air currents.
- Acid rain can have harmful effects on the environment, including damage to forests, lakes, and buildings, as well as harm to human health.

89 Option (c) is correct.

Explanation: Orissa had a low literacy rate.

- The national average of literacy rate in the year 2001 was 64.84 percent.
- The literacy rate in Orissa is 63.25 percent in Maharashtra it is 76.48 percent, in Gujarat it is 69.14 percent, and in West Bengal it is 68.64 percent.

90 Option (c) is correct.

Explanation: According to estimates, more than 2.5-3 lakh people died due to the tsunami caused by the earthquake, besides countless bodies were washed away in the sea. All other given options are correct.

91 Option (a) is correct.

Explanation:

- The Deccan Plateau of peninsular India extends further east beyond the Rajmahal hills to Meghalaya or the Shillong plateau.
- The valley of Kashmir was formed in a Synclinorium. The valley is bounded on the southwest by the Pir Panjal Range and on the northeast by the main Himalayas range.
- The Indo-Gangetic plain was formed when sediments from the Himalayas and those from northern Peninsular India were deposited in the foredeep basin in front of the rising Siwalik Ranges.
- The origin of the Himalayas is due to the convergence of the Eurasian plate in the north and the African-Indian plate in the south.
- The description of the Chinese plate is not given in the plate tectonic theory.

92 No option is correct. (Bonus)

Explanation:

According to the final data of 2011 census, the following is the descending order of population density- Darbhanga (1721), Siwan (1495), Saran (1493), Samastipur (1465)

93 Option (b) is correct.

Explanation: High-grade iron ore deposits are found in Goa and some regions of Madhya Pradesh and the comparative Case of exporting steel from here.

- Iron and steel industry is called heavy industry.
- These are established where the main raw materials like iron ore, coking coal, lime, stone etc. are easily available.
- The west coast of India is well connected to the iron ore mines located in the central and southern parts of the country.
- This makes it easy and economical to obtain raw materials for steel plants, as well as export them at a lower cost due to the proximity of ports.

94 Option (c) is correct.

Explanation: The statement is correct but the reason is incorrect, the demand for consumer goods has increased in this country.

- It is believed that in the late 1980s and early 1990s, India underwent a significant structural change in its industrial sector.
- This shift included a shift from a focus on consumer goods industries to a greater emphasis on basic and capital goods industries.
- This shift was driven by a number of factors, including changes in government policies and the opening of the Indian economy to greater foreign investment and competition.

95 Option (c) is correct.

Explanation: After the success of the first Green Revolution in India, the emphasis was now on the Second Green Revolution. Under this, seed, water, fertilizer

technology has to be expanded in the areas which have not yet been benefited from the Green Revolution, and it has to be integrated with animal husbandry, social forestry, fisheries and crop production.

96 Option (a) is correct.

Explanation: During the last decade energy production in India has shown a increasing trend.

- At that time, the per capita energy consumption in the world is the lowest in India. But presently, it is of Bangladesh.
- At that time, the non-conventional sources of energy contribute less than one percent of the total commercial energy produced in India. Presently, India is the world's third largest producer of renewable energy, with 40% of its installed electricity capacity coming from non-conventional sources.
- Industry is the major energy consuming sector in India.

97 Option (c) is correct.

Explanation:

- During 1991-2001 decade the population grew at the rate of nearly 21%.
- The 1991 census reflected a decline in the number of unproductive consumers. The gap in male-female literacy rates has decreased from 24.84 percentage points in 1991 to 21.70 percentage points in 2001.
- In India, out of the total population of 1027 million as on 1st March 2001, about 742 million (72.2 per cent) live in rural areas and 285 million (27.8 per cent) live in urban areas.

98 Option (c) is correct.

Explanation: The Karamnasa, Gandak, and Ghaghra rivers form the boundary line between Uttar Pradesh and Bihar.

- The origin of the river Karamnasa has been the hills of Vidhyachal, joins the Ganges near Chausa.
- The origin of Gandak river has been Mangarmar-Kutang (Tibet-Nepal),joins the Ganges near Hajipur.
- The Saryu or Ghaghra river originates in the Nampa range of Nepal, joins the Ganges near Chhapra.

99 Option (b) is correct.

Explanation: Karnataka is the largest coffee producer in India, accounting for approximately 70% of the total coffee production.

- It is cultivated in Baba Budan Hills of Karnataka.
- In India, coffee is typically grown in the Western Ghats, which are spread over the states of Karnataka, Kerala, and Tamil Nadu.

100 Option (b) is correct.

Explanation:

- As a result of the flow of Himalayan rivers, the water level rises, due to which the plains of Bihar and Uttar Pradesh get flooded.
- The foothills of the Himalayas are prone to earthquakes due to being marshy.

■ Middle East India is drought prone area and Jharkhand and North Odisha area is cyclone prone area.

101 Option (b) is correct.

Explanation:

- North and north-eastern Bihar plain is spread over 29.87%.
- \blacksquare The extension of Southern Bihar Plain is spread over 23.71%.
- Chhota Nagpur Plateau 26.14% and Chhota Nagpur Hills 20.28%.

102 Option (d) is correct.

Explanation: The year 1921 is known as "the year of the great divide".

- The year 1921 is known as the "Demographic Divide" or "Year of the Great Divide" because population growth was minimal before this time.
- However, after 1921, India's population growth has been increasing steadily.
- From 1921 to 1931, the population grew by 11.1%, from 1931 to 1941 by 14.00%, and from 1941 to 1951 by 13.5%.

103 Option (c) is correct.

Explanation: Agriculture contributes 47.4% to the state's GDP. Silk industry in Bihar provides self-employment to over 1,50,000 people.

■ About 47 lac acres of land in Bihar get flooded every year, while 10 lac acres remain permanently waterlogged. 76.6% farmers come under the category of marginal farmers. Those who have one hectare of land or less.

104 Option (a) is correct.

Explanation:

- National Highway No. 2 passing through Bihar is from Kolkata to Delhi.
- National Highway No. 12 connects Jabalpur to Jaipur.
- The longest highway of Bihar is National Highway
- The proposed National Highway No. 87 is between Rampur and Nainital.

105 Option (c) is correct.

Explanation: According to the 2001 census data, the literacy rate in Bihar was the lowest in the country.

- According to the 2001 census data, the literacy rate in Bihar was the lowest in the country at 47.0 percent, in which male literacy was 59.68% and female literacy was 33.12%.
- According to the 2011 census, the literacy rate of Bihar is 61.80%. The male literacy rate is 71.20% while the female literacy rate is 46.40%.

106 Option (b) is correct.

Explanation: According to the year 2002, the birth rate of Bihar was 30.9 per thousand.

- India's birth rate has come down significantly in the last four decades.
- The birth rate was 36.9 in 1971, which decreased to 20.0 in 2018.
- Bihar has the highest birth rate of 26.2, while Andaman and Nicobar has the lowest of 11.2.

Explanation: Coal reserves in Bihar on January 1, 2003 were 160 million tonnes. Coal reserves in Bihar as on March 31, 2018 are 137 million tonnes.

108 Option (b) is correct.

Explanation: The proportion of agricultural laborers in the total labor force of Bihar is 48.18%, 37.12% agricultural workers, 9.558% marginal workers and 2.69% work in production units.

Option (b) is correct.

Explanation: Bihar was the largest mica producing state according to the question year.

- The major mica-producing states in India are Andhra Pradesh, Rajasthan, Jharkhand, Bihar, Madhya Pradesh, Gujarat, Chhattisgarh, Kerala, Tamil Nadu, and Uttar Pradesh.
- Andhra Pradesh contributes around 71 per cent of the total mica produced in India.
- Bihar's Gaya and Nawada districts are also known for mica production and account for nearly 9 per cent of the country's production.
- Mica is an important non-metallic mineral in India that finds application in various industrial fields such as cement, fertilizers, electrical appliances, etc.

Option (b) is correct.

Explanation: The Spirit of aggressive nationalism is not a factor that contributes to international relations.

■ Technological advancement, the development of international trade, and the development of industries are examples of factors that contribute to international relations.

Option (c) is correct.

Explanation: The main idea behind 'Globalisation' is working together with the entire international community with a shared common perspective.

- Globalisation is a concept that refers to the integration of economies, societies, and cultures across national boundaries.
- The main idea behind globalisation is to promote greater interconnectedness and interdependence between countries and their citizens.

Option (d) is correct.

Explanation: P. V. Narasimha Rao is often referred to as the "Father of Indian Economic Reform".

- Liberalization started in India from the year 1991.
- Pamulaparthi Venkata Narasimha Rao is known as the father of Indian economic reform. He was an Indian lawyer and politician who served as the 9th Prime Minister of India from 1991 to 1996.

Option (d) is correct.

Explanation: At that time the share of textile sector in India's export is 21% and jewellery and ornaments 17%.

- Western Europe and North America together account for 53% of India's exports and 40% of its imports.
- Latin America, Sub-Saharan African and Middle East Countries offer the most potential markets for Indian export trade.

■ India's export trade in 2003 value was about 0.08% of the total export trade of the world.

114 Option (d) is correct.

Explanation: In India, estimates of national income are prepared by the Central Statistics Office (CSO).

- The Central Statistics Office (CSO) functions under the Ministry of Statistics and Program Implementation.
- The CSO calculates the national income using the data collected from various sources, including the Annual Survey of Industries, the National Sample Survey, and the Economic Census.
- The CSO prepares estimates of Gross Domestic Product (GDP), Gross National Income (GNI), and other related indicators, which are used to measure the economic performance of the country.

115 Option (d) is correct.

Explanation: After the bifurcation of Bihar, the natural resources went to the state of Jharkhand, that is, at present Bihar lacks both natural resources and potential.

■ The Gross Fertility Rate of Bihar is higher than the National Fertility Rate, Bihar lacks infrastructural facilities and business-friendly environment.

116 Option (a) is correct.

Explanation: In India, the service sector is the main contributor to national income, accounting for more than 55% of the GDP.

- The service sector is the largest and fastest-growing sector in India, with high labour productivity.
- The services sector in India encompasses various activities such as trade, hotels and restaurants, transportation, storage and communication, finance, insurance, real estate, business services, community, social and personal services, and services related to construction.

117 Option (c) is correct.

Explanation: The architect of the Second Five-Year Plan was P. C. Mahalanobis.

- The Second Five-Year Plan was implemented from April 1956 to March 1961.
- The goal of this plan was a priority to industries, a 4.5 per cent annual increase in national income, and employment generation.
- Mahalanobis emphasized strengthening the country's industrial foundation.

118 Option (c) is correct.

Explanation: NABARD was established on July 12, 1982, under the tenure of the Sixth Five Year Plan (1980-85).

- NABARD (National Bank for Agriculture and Rural Development) is a development bank in India headquartered in Mumbai.
- Its primary objective is to boost the rural economy by increasing credit flow to the agriculture and non-farm sectors
- It is the apex institution providing finance for agriculture and rural development in the country.

Explanation: As the economy develops, the share or contribution of the tertiary sector (trade, transport, communication, banking, insurance, real property) in the national income increases.

- This is because as a country becomes more developed, there is typically a shift from agriculture and manufacturing towards services, which are key components of the tertiary sector.
- This shift can be seen in the form of increased spending on healthcare, education, transportation, communication, and other services.
- As the demand for services increases, so does the contribution of the tertiary sector to the national income.

(120) Option (c) is correct.

Explanation: Interest rate is not a tool of Fiscal Policy.

- Taxation, public expenditure, public debt etc. are the tools of fiscal policy which are brought by the central government.
- Fiscal Policy refers to the government's use of taxation and public expenditure to influence the economy.

Option (a) is correct.

Explanation: In the context of the year in question, according to the budget 2005-06, the maximum revenue for the central government was received from corporation tax.

■ According to the budget 2023-24, the Government of India is estimated to receive 15 percent of the funds from corporation tax and 15 percent from income tax as direct taxes.

Explanation: Bihar state has the lowest per capita income in India.

■ Per Capita Income in India refers to the average income earned by an individual over a period of one year.

Explanation:

Explanation:
Average Speed =
$$\frac{\text{total distance}}{\text{total time taken}}$$

Total Distance = $15 + 20 + 25 = 60 \text{ km}$

Time = $\frac{\text{Distance}}{\text{Speed}}$

= $\frac{15}{15} + \frac{20}{25} + \frac{25}{15}$
 \therefore Average Speed = $\frac{60}{\frac{15}{15} + \frac{20}{25} + \frac{25}{15}}$

= $\frac{60 \times 15}{52} = \frac{225}{13}$

= 17.3 km/h

124 Option (b) is correct.

Explanation:

Let
$$5x + y = 100$$
 ...(i)
 $x + y = 60$...(ii)

Subtracting equation (ii) from equation (i)

$$5 x + y = 100$$

$$- x + y = 60$$

$$4 x = 40$$

$$x = 10$$

$$y = 50$$
Hence, $z = 50 x + 15 y$ (maximum value)
$$= (50 \times 10) + (15 \times 50)$$

$$= 500 + 750 = 1250$$

Explanation:

Let p = probability that an individual is suffering fromthe disease = $20\% = \frac{1}{5}$ q = probability that an individual is not suffering from

the disease
$$= 1 - p = 1 - \frac{1}{5} = \frac{4}{5}$$

$$\therefore p = \frac{1}{5}, q = \frac{4}{5}, n = 5$$

$$P(X = r) = {}^{n} C_{r} p^{r} q^{n-r}$$

$$\therefore P(X = 2) = {}^{5} C_{2} \left(\frac{1}{5}\right)^{2} \left(\frac{4}{5}\right)^{3}$$

$$\therefore P(X = 2) = {}^{5} C_{2} \left(\frac{1}{5}\right)^{2} \left(\frac{4}{5}\right)^{3} = \frac{128}{625} = 0.2048$$

Thus, the required probability = 0.2048.

126 Option (a) is correct.

Explanation:

$$\begin{vmatrix} 1 & 2 & 3 \\ k & 0 & 4 \\ -2 & 4 & 2 \end{vmatrix} = 0$$

$$1\begin{vmatrix} 0 & 4 \\ 4 & 2 \end{vmatrix} - 2\begin{vmatrix} k & 4 \\ -2 & 2 \end{vmatrix} + 3\begin{vmatrix} k & 0 \\ -2 & 4 \end{vmatrix} = 0$$

$$\Rightarrow (0 - 16) - 2(2k + 8) + 3(4k - 0) = 0$$

$$\Rightarrow 8k = 32$$

$$k = 4$$

\\127\) Option (d) is correct.

Explanation:

Explanation:

$$f(x) = \frac{1}{1-x}$$

$$f(f(x)) = \frac{1}{1-\frac{1}{1-x}} f[f(f(x))] = \frac{1}{1-\frac{1-x}{-x}}$$

$$= \frac{\frac{1}{1-x-1}}{\frac{1-x}{1-x}} = \frac{1-x}{-x}$$

$$= \frac{1}{1+\frac{1-x}{x}} = \frac{1}{\frac{x+1-x}{x}} = x$$

Explanation:

(a) The consumer Price Index (CPI) is the price of the commodity in the current year with reference to its price in the base year taken as 100.

So, CPI =
$$\frac{\text{Price in the current year}}{\text{Price in the base year}} \times 100$$

⇒ Price in the current year

$$= \frac{\text{CPI} \times \text{Price in the base year}}{100}$$

 \Rightarrow Wages in the current year

$$\frac{\text{CPI} \times \text{Wages in the base year}}{100} = ₹ \left(\frac{325 \times 240}{100} \right) = ₹780$$

Option (c) is correct.

Explanation:

$$2x - y + z = 6$$

$$a_1 = 2, b_1 = -1, c_1 = 1$$

$$x + y + 2z = 7$$
Here, $a_2 = 1$, $b_2 = 1, c_2 = 2$

$$\cos \theta = \frac{a_1 a_2 + b_1 b_2 + c_1 c_2}{\sqrt{a_1^2 + b_1^2 + c_1^2} \times \sqrt{a_2^2 + b_2^2 + c_2^2}}$$

$$= \frac{(2 \times 1) + (-1 \times 1) + (1 \times 2)}{\sqrt{(2)^2 + (-1)^2 + (1)^2} \times \sqrt{(1)^2 + (1)^2 + 1(2)^2}}$$

$$= \frac{2 - 1 + 2}{\sqrt{6} \cdot \sqrt{6}} = \frac{3}{6} = \frac{1}{2}$$

Hence, $\theta = 60^{\circ} = \frac{\pi}{3}$ Option (b) is correct.

Explanation:

$${}^{n}C_{1} + {}^{n}C_{2} + {}^{n}C_{3} + - - - {}^{n}C_{n} = 225$$

$$\Rightarrow {}^{n}C_{0} + {}^{n}C_{1} + {}^{n}C_{2} + - - - {}^{n}C_{n} = 2^{n}$$

$$\Rightarrow {}^{n}C_{1} + {}^{n}C_{2} + - - - {}^{n}C_{n} = 2^{n} - 1$$
Hence,
$$2^{n} - 1 = 255 \Rightarrow 2^{n} = 256$$

$$2^{n} = 2^{8} \Rightarrow n = 8$$

Option (c) is correct.

Explanation:

$$x = \frac{1}{3}(24 - 2p)$$

$$3x = 24 - 2p$$

$$2p = 24 - 3x$$

$$\therefore p = \frac{24 - 3x}{2}$$

$$R = (x) - p(x) = 12x - \frac{3x^2}{2}$$

$$\therefore \frac{dR}{dx} = 12 - 3x$$
If value of x is high
$$\frac{dR}{dx} = 0$$

$$12 - 3x = 0$$

$$\therefore 12 - 3x = 0$$

x = 4

Again
$$\frac{d^2R}{dx^2} = -3$$

 \therefore R(x) will be maximum at $x = 4$
 \therefore $P = 12 - \frac{12}{2} = 6$

$\sqrt{132}$ Option (a) is correct.

Explanation:

Nominal value = ₹10 Number of Shares = 1500 One share market value = ₹25 Market value of shares = 1500 × 25 = ₹37500

= ₹37500
Declared 10% Dividend =
$$\frac{37500 \times 10^{\circ}}{100^{\circ}}$$
= ₹3750

Option (a) is correct.

Explanation: According to the examination year, the then Secretary General of the United Nations was Kofi Annan of Ghana.

- The current Secretary-General of the United Nations is Antonio Guterres of Portugal.
- Guterres took the oath of office on 1 January 2017 and served as the UN Secretary-General for his first term until 31 December 2021.
- The United Nations General Assembly has reappointed Antonio Guterres United Nations Secretary-General (UNSG) for a second term. His term is set to commence on January 1, 2022, and conclude on December 31, 2026.

Option (b) is correct.

Explanation: According to the examination year, the summit meeting of the heads of government of the member countries of the North Atlantic Treaty Organization (NATO) was held in Prague, the capital of the Czech Republic.

- The 2022 NATO summit was held in Madrid, Spain.
- This was the 32nd edition of the summit.

Option (a) is correct.

Explanation: In the Parliamentary Conference held in China in January 2003, a delegation led by the then Lok Sabha Speaker Manohar Joshi went to China, which had 22 members.

■ The delegation's purpose was to strengthen parliamentary exchanges and promote mutual understanding between India and China.

Option (b) is correct.

Explanation: The energy of the Sun is released due to nuclear fusion reactions.

- Fusion is a process where two lighter nuclei are made to fuse together to form a heavier atom's nucleus.
- In fusion, two nuclei of a heavier isotope of hydrogen called tritium are fused, and it releases at least four times more energy than the fission of a uranium atom, which is the typical process of generating electricity in a nuclear reactor.

Option (a) is correct.

Explanation: Malaysian Prime Minister Abdullah Ahmad Badawi visited India from 19-23 December 2004.

The current Prime Minister of Malaysia is Anwar bin Ibrahim, is the 10th Prime Minister of Malaysia.

138 Option (a) is correct.

Explanation: Emergency was imposed on February 1, 2005.

- The King of Nepal declared a state of emergency on February 1, 2005.
- The emergency was declared after political unrest and protests against the monarchy had been ongoing for several years.
- At present, democracy has been established in Nepal and there is no king.
- Presently Ramchandra Poundel is the President of Nepal and Pushpa Kamal Dahal is the Prime Minister.

Option (b) is correct.

Explanation: In 2005, the Palestinian leader was Mahmoud Abbas. He was elected as the President of the Palestinian Authority in January 2005, succeeding Yasser Arafat. This election marked the first since the 1996 general election and was significant for the Palestinian leadership. Abbas secured over 67% of the votes, while Mustafa Barghouti, an independent candidate, came in second with 21% of the vote. Notably, this election saw a boycott by Hamas and Islamic Jihad.

Option (c) is correct.

Explanation: The Indo-US Summit held in November 2004 was represented by the Prime Minister of India at that time, Dr. Manmohan Singh.

141 Option (c) is correct.

Explanation: The 13th Non-Aligned Movement (NAM) summit was held in Kuala Lumpur, the capital of Malaysia during February, 2003 AD.

The 18th summit meeting of the Non-Aligned Movement (NAM) was held on October 25-26, 2019 in Baku, Azerbaijan.

Option (a) is correct.

Explanation: The second India-ASEAN summit was held in Bali in which India was represented by the then Indian Prime Minister Atal Bihari Vajpayee.

- The 19th ASEAN-India Summit 2022 was held in Phnom Penh, Cambodia.
- The Indian delegation was led by Jagdeep Dhankhar, Vice President of India.

143 Option (a) is correct.

Explanation: Presidential elections in Afghanistan were held on 9 October 2004.

- Hamid Karzai was declared President.
- This election was held under the supervision of the United Nations.

Option (b) is correct.

Explanation: Syed Sibtey Razi was the then Governor of Jharkhand.

At present C. P. Radhakrishnan is the governor of Jharkhand.

Option (b) is correct.

Explanation: The Prime Minister of India is the real executive head of the Central Government.

■ The Prime Minister of India is the Chief executive of Government of India. In India's parliamentary system, the Constitution of India names President as head of state but his/her de-facto executive powers vested in Prime Minister and his/her Council of Ministers.

Option (b) is correct.

Explanation: The World Trade Organization (WTO) was established on January 1, 1995 in accordance with the Marrakesh Agreement of 1994, replacing the 1948 Convention General Agreement on Tariffs and Trade (GATT).

- It is an intergovernmental organization that regulates and facilitates international trade between nations.
- It has 164 member states, representing more than 98% of global trade and global GDP.

147 Option (b) is correct.

Explanation: King Jigme Singye Wangchuck of Bhutan was the Chief Guest of the Republic Day celebrations in 2005.

Jigme Singye Wangchuck had the honour of being the Chief Guest at the Republic Day celebrations twice in 1984 and 2005.

148 Option (d) is correct.

Explanation: The G-7 summit was held on 2–3 June 2003 in the French city of Deauville.

- The 48th G7 Summit (2022) is chaired by Germany.
- Germany presides over the G7 in 2022.
- G7 is an intergovernmental organization that was established in 1975.
- The G7 meets annually to address matters related to global economic governance, international security and energy policy.
- The G7 comprises seven member countries: UK, Canada, France, Germany, Italy, Japan and the USA.

Option (b) is correct.

Explanation: In March 2003, Hu Jintao was appointed as the chairman of the Central Military Commission and he was the supreme leader of China.

- Hu Jintao's term ended in 2013.
- Currently Xi Jinping is the supreme leader of China.
- He has been the President of China since March 2013.

Option (c) is correct.

Explanation: The then Governor of Goa, S. C. Jamir dismissed Manohar Parrikar-led BJP government on behalf of President on 3 February 2005. On 5 February 2005, the Congress government was formed in Goa.

