

Bihar Public Service Commission

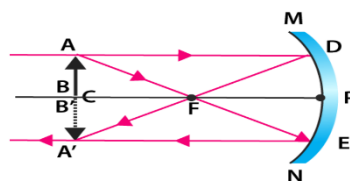
69th Integrated Combined (Preliminary) Competitive Examination

Examination Date : 30.09.2023

PROVISIONAL ANSWER KEY : General Studies

Series-A		Series-B		Series-C		Series-D		Remarks
Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	
1	D	38	A	68	B	117	C	‘Internet of things’ (IOT) is the collective network of connected devices and the technology that facilitates communication between devices and cloud as well as between devices themselves. Edge computing is an emerging paradigm which refers to arrange of networks and devices at or near the user. And, ‘Network Slicing’ is a network configuration that allows multiple networks to be created on top of common physical infrastructure. All of these three will be enabled by the 5G mobile communication networks so that (D) is correct option.
2	A	39	B	69	C	118	D	(a) Cassini Huygens matches with (2) (Saturn and its rings) because it is a space research mission by NASA, ESA & ISA to send space probe to study the planet Saturn & its system. (b) Juno matches with (1) (Jupiter) it is a mission, designed to improve our understanding of the Solar System’s beginnings by revealing the origin and evolution of Jupiter. (c) Artemis matches with (4) (Human Space-Flight-Moon to Mars) because Artemis is a NASA mission that will land the 1st Woman and first Person of Color on the Moon using in movatue technology. (d) VERITAS matches with (3) (Venus) because VERITAS Mission is for studies of the surface and interior of Venus with a powerful new generation of Scientific tools. Hence (A) is correct option.

Series-A		Series-B		Series-C		Series-D		Remarks
Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	
3	C	40	D	70	A	119	B	
4	C	41	A	71	B	120	A	Human being when acts as a primary host, develops the disease Taeniasis by <i>Taeniasolium</i> , <i>Taeniasaginata</i> and <i>Taenia. asiatica</i> and when acts as a secondary host, develops Neurocysticercosis. Hence, the option 'C' is correct.
5	D	42	D	72	D	91	D	'Cobra' is a high-level, object-oriented programming language used for general programming purposes, 'Python' is a high-level general purpose programming language, 'Squirrel' is a programming language similar to 'Lua', but uses a 'C' like syntax and finally 'Java' is a popular programming language created in 1995 and is being used for mobile applications. Hence all four being computer languages, (D) is the correct option.
6	D	43	A	73	B	92	C	GPT, in Chat GPT, stands for 'Generative Pretrained Transformer'. Hence (D) is the correct option.
7	C	44	D	74	A	93	B	Tongue of human being has different types of papillae associated with taste buds and are responsible for detecting the tastes like – 1. Sweet, 2. Bitter, 3. Salty, 5. Umami and 6. Sour. They do not detect the 'Spicy' taste (Option-4) and the 'Pungent' (Option-7) which is associated with smell. Hence option 'C' is correct
8	C	45	A	75	B	94	A	1. Anorexia is associated with 'Eating disorder', 2. Insomnia – Sleep disorder, 3. Dyspnoea- Shortness of breath and 4. Anosmia is associated with 'Partial or full loss of smell'. Only options 3 and 4 are correctly matched. Hence, the option 'C' is correct.
9	B	46	C	76	D	95	A	Rotating spinning neutron stars have strong magnetic fields so that they emit high energy beams from its north and south magnetic poles and when these beams are pointed towards earth and flash across us as the neutron star rotates, we see pulses and hence called pulsars. Hence (B) is correct option.

Series-A		Series-B		Series-C		Series-D		Remarks
Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	
10	C	47	D	77	A	96	B	Graphite and diamond are called allotropes of carbon. A very thin slice (like a hair) of Graphite is used as a diamond seed. Hence, (C) is the correct option.
11	D	48	A	78	B	97	C	Kevlar is the most commonly used material as armour for protection against bullets used in hand guns because of its impact resistance, high strength and low weight. These properties make Kevlar an ideal material to be used in bullet-proof vests as compared to other materials.
12	C	49	D	79	A	98	B	Full form of HMX is ' High Melting Explosive'. Hence (C) is the correct option.
13	D	50	A	80	B	99	C	Tesla CEO Elon Musk released AI-powered humanoid robot, 'Optimus', engaging in various activities in October 2022. Hence (D) is the correct option.
14	A	51	B	51	C	100	D	'The Manhattan Project' has a top secret research and development undertaking, by USA, to make atomic bomb during World War II. Hence (A) is the correct option.
15	B	52	C	52	D	101	A	<p>If an object is placed at the centre of curvature of a Concave mirror, then the image formed is real, inverted and of the same size as that of the object.</p> 
16	A	53	B	53	C	102	C	Photoelectric cell is driven by Photoelectric effect in which cathode is radiated by uv rays and electrons come out of which constitute electric current. Hence the correct answer is (A).
17	D	54	A	54	B	103	C	The amount of solute present per unit volume or per unit mass of the solution is universally said to be concentration of solution in chemistry. Ref. NCERT class IX page 16 second last paragraph.

Series-A		Series-B		Series-C		Series-D		Remarks
Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	
18	A	55	B	55	C	104	D	<p>Answer option (A) –Covaxin falls under this category i.e. Inactivated or attenuated live virus</p> <p>Answer option (C)- Covishield apparently fall under this category but it is a viral vector vaccine that uses an adenovirus found in Chimpanzees, ChAD0x1 and not SARS-CoV-2 virus. Other options are obviously incorrect. So the correct answer is A.</p>
19	D	26	D	56	D	105	D	<p>In salt water, the water pulls apart sodium & chlorine ions so that it becomes good conductor because of the existence of these ions. In orange juice, as well as, lemon juice, that is acid containing H^+ ions. These ions make the good conductor of electricity. Hence, (D) is the correct option.</p>
20	A	27	B	57	C	106	D	<p>The discovery in 1953 of the double helix, the twisted-ladder structure of deoxyribonucleic acid (DNA), by James Watson and Francis Crick marked a milestone in the history of science. Nobel Prize in Physiology or Medicine in 1962 was awarded to James Watson and Francis Crick.</p>
21	C	28	D	58	A	107	B	<p>If two objects of different masses (From the same height) in free fall near the surface of the Moon will have same speed at any instant because</p> $h = \frac{1}{2}gt^2 (u=0)$ $t^2 = 2h/gm$ $v = gt = gm\sqrt{\frac{2h}{g}} = \sqrt{2g_m h} (g_m \approx g_E/6)$ <p>speed at any moment is independent of mass, it depends only on gm and h.</p>
22	C	29	D	59	A	108	B	<p>Vector vaccines use a harmless virus containing nucleic acid of disease-causing virus. These modified virus make antigen inside host and provide protective immunity against it.</p>
23	C	30	D	60	A	109	B	
24	C	31	D	61	A	110	B	

Series-A		Series-B		Series-C		Series-D		Remarks
Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	
25	A	32	B	62	C	111	D	mRNA stands for messenger RiboNucleic Acid and is the single stranded molecule that carries the instructions to make proteins. During pandemic mRNA is detected by RT-PCR for diagnosis of disease.
26	B	33	C	63	A	112	B	Dynamo acts both as DC current generator as well AC current generator. Hence answer (B) is correct.
27	B	34	C	64	A	113	B	Electric current is defined as surface integral of current density i.e. $I = \int \vec{j} \cdot \vec{ds}$ Hence current density (\vec{j}) is a vector quantity.
28	B	35	C	65	A	114	B	
29	D	36	D	66	D	115	D	
30	B	37	C	67	A	116	B	Input nerve (Sensory) and Output nerve (Motor) meet at the Spinal cord, which is one of the major parts of the Central Nervous System. Hence the option "B" is correct.
31	A	62	B	97	C	141	D	In the context of 'Shiwreck Tourism', it has been explored at Sunchi Reef, Ameen Shoals and Grande Island off the Coast of Goa.
32	B	63	C	98	D	142	A	Statement 1 and 3 are correct in context of G20 members.
33	Deleted	64	Deleted	99	Deleted	143	Deleted	Yevgeny Prigozhin died on 23.08.2023 and this exam was held on 29.09.2023. So on the date of examination no one was the Head of Russia's Wagner Mercenary Group. Since no option is correct. Hence question may be deleted.
34	C	65	D	100	A	144	B	The Global Gender Gap report is released by the World Economic Forum.
35	A	66	B	101	C	145	D	Queen Elizabeth II reigned for 70 years (1952-2022) and died at the age of 96 years (1926-2022).
36	B	67	C	102	D	146	A	Path to Pride was the theme of Def Expo. 2022 held in Gujarat.
37	D	68	A	103	B	147	C	Thadingyut Festival is celebrated in Myanmar.
38	D	69	A	104	B	148	C	Statements 2, 3 and 4 are correct.

Series-A		Series-B		Series-C		Series-D		Remarks
Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	
39	C	70	D	105	A	149	B	Net Metering is an electricity billing mechanism for solar energy by consumers which is added to the grid.
40	A	71	B	106	C	150	D	Combination of Red and Blue form magenta and till is the the combination of blue, area as white. So correct choice is only (A).
41	D	72	A	107	B	121	C	The name of imploded deep Sea submersible was Titan.
42	B	73	C	108	D	122	A	Correctly matched is option 'B'.
43	C	74	D	109	A	123	B	
44	D	75	A	110	B	124	C	Statement 2 and 4 are correctly matched pairs.
45	C	76	D	81	A	125	B	There are 576 Languages in the country according to the Mother Tongue Survey of India (MTSI).
46	A	77	B	82	C	126	D	Tamil Nadu launched the State-Level committee for Vulture conservation (SLCVC) for the protection of Vulture in India.
47	A	78	B	83	C	127	D	Ten captive-bred Asian Giant Tortoises (Manouriaemys) were recently released into Ntangki National Park.
48	A	79	B	84	C	128	D	India's Rudrankksh Balasaheb Patil won Gold medal in Men's 10 m Air Rifle at the ISSF World Championship in Cairo.
49	A	80	B	85	C	129	C	
50	A	81	B	86	C	130	D	As per New Education Policy, integration of vocational education is from Class 6 onwards, and not from Class 10. The Policy stipulates that school students will have 10 bagless days in a year, during which they are to be exposed to a vocation of choice. This will be supplemented by experiential vocational learning from Grades 6 to 8. Every student will take a fun course during Grades 6 to 8 that gives a survey and hands on experience of vocational crafts.
51	B	82	C	87	D	131	A	India signed the Economic Cooperation and Trade Agreement (ECTA) with Australia.
52	C	83	D	88	A	132	B	The Plain Language Act was passed by the New Zealand recently.

Series-A		Series-B		Series-C		Series-D		Remarks
Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	
53	C	84	D	89	A	133	B	Fossils of the oldest known insect and the world's first plant pollinators called Tillyardembiids was discovered recently in Russia. Tillyardembiids are earwig-like insects. The specimens found in Russia were estimated to be around 280 million years old.
54	C	85	D	90	A	134	B	The 'Lisbon Declaration' is associated with the conservation of Oceans.
55	B	56	C	91	A	135	B	Horse was not known to the Indus Valley people.
56	C	57	A	92	B	136	A	India Gate is not a UNESCO World Heritage site.
57	C	58	A	93	B	137	A	
58	B	59	C	94	A	138	B	
59	B	60	C	95	A	139	B	
60	B	61	C	96	D	140	A	With the help of UNEP, the Bihar Government has planned to make Bihar as the 'Pollution Free State by reducing carbon emissions by 2024. Hence the option 'B' is correct.
61	C	93	D	125	A	18	B	Stupa, Chaitya and Vihara are all associated with Buddhism.
62	C	94	D	126	A	19	B	Sujini is a type of embroidery.
63	C	95	A	127	B	20	A	Statements 1 & 2 are correct.
64	C	96	A	128	B	1	A	Statements 3& 4 are correct.
65	B	97	C	129	D	2	A	Surat was referred as Bab al-Makkah in Mughal times as it was a departure point for pilgrims travelling for Hajj.
66	C	98	D	130	A	3	B	Ashtapradhan was the name given to the eight ministers/advisors of Shivaji.
67	C	99	D	111	A	4	B	Painting of Bodhisattva Padmapaniis a mural painting in the Ajanta Cave 1.
68	D	100	D	112	D	5	D	Statements 1 & 2 are incorrect.
69	A	101	B	113	C	6	D	The correct match between List 1 & 2 is a-2, b-1, c-4, d-3.
70	C	102	D	114	A	7	B	Balban introduced many Iranian practices at his Court, including Nowruz.
71	A	103	B	115	C	8	D	Nathpanthis, Siddhas and Yogis popularized devotional cult in Northern India.
72	C	104	D	116	A	9	B	Wood's Dispatch of 1854 provided for use of English language for higher learning and Vocational and Women education .So both Statement 1 & 2 are correct.

Series-A		Series-B		Series-C		Series-D		Remarks
Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	
73	C	105	D	117	A	10	B	Maithili language developed under the Karnata dynasty.
74	A	86	B	118	C	11	D	Rajagriha served as the capital of the kingdom of Magadh.
75	D	87	A	119	B	12	C	Statements 1, 2 and 3 are correct.
76	D	88	A	120	B	13	C	All 4 statements (1, 2, 3 and 4) are correct.
77	B	89	C	121	A	14	B	Kamandaka was the author of Nitisara.
78	A	90	B	122	C	15	C	Futuh-at-e-Alamgi was written by Ishwar Das Nagar.
79	B	91	C	123	A	16	B	Meghavarman of Sri Lanka sent an emissary to Samudragupta seeking permission to construct a temple at Bodh Gaya.
80	A	92	B	124	C	17	C	Bihar was first separated from Bengal Presidency in 1912.
81	D	111	A	140	B	36	C	L. Victoria is and longest freshwater Lake and it is not bordered by Kenya. Kenya. Hence options 1 & 3 are wrong.
82	D	112	A	141	B	37	C	Heat wave is considered at 40° in Plains and 30° in Hilly regions. Hence both options (1) & (2) are wrong.
83	A	113	B	142	C	38	D	Only this option matches List I with List II.
84	A	114	B	143	C	39	D	Only this option lists all emirates of UAE correctly.
85	D	115	A	144	B	40	C	River Subarnarekha originates near village Nagri.
86	A	116	B	145	C	21	D	Serial no. 1 & 4 are in Bihar. No. 2 is in UP and No. 3 is in Rajasthan.
87	D	117	D	146	D	22	D	Gangetic River Dolphin (also recognized as India's National Aquatic Animal) has been categorized as 'endangered animal in the IUCN's Red List. It is blind as it does not have a crystalline eye lens. Further, navigation and hunting are carried out by using echolocation. Thus all statements are correct. Option 'D' is correct.
88	C	118	D	147	A	23	B	The other names of river Gandak are Narayani and Salgrami.
89	D	119	A	148	B	24	C	Gold has been found in Jamui but not in the other three districts mentioned.
90	C	120	D	149	A	25	B	Triveni canal has been constructed on river Gandak.
91	A	121	B	150	C	26	D	Assertion (A) and Reason (R) are true and correct.

Series-A		Series-B		Series-C		Series-D		Remarks
Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	
92	A	122	B	131	C	27	D	Only this option provides correct watch of rock systems with their descriptions.
93	A	123	B	132	C	28	D	Gulf of Mannar Biosphere Reserve matches with the description given.
94	A	124	B	133	C	29	D	The earth rotates 1° Longitude in 4 minutes. Hence it will rotate 90° in 6 hours.
95	B	125	C	134	D	30	A	Except 'B' all other options are wrong.
96	C	106	A	135	B	31	A	There will be 180 latitudes minus 1 since equator 0° is common.
97	C	107	A	136	B	32	A	The average height of Kosi plain is 100
98	B	108	C	137	A	33	B	Tropic of Cancer is $23 \frac{1}{2}^\circ$ N and 1ST line is $82 \frac{1}{2}^\circ$ E. They intersect in Baghelkhand.
99	C	109	A	138	B	34	A	The borders of Almora District connect other districts of Uttarakhand. All other options have one border along Tibet.
100	A	110	B	139	C	35	C	El Nino current flow is confined to Pacific ocean area and along Peru coast in Eastern Pacific even though its effect is wide spread including India. Since question is about its current flow only, hence the correct answer is option (A).
101	D	128	A	7	B	49	C	
102	C	129	D	8	A	50	B	According to 42 nd Amendment added three words in the preamble and also empower the President of India to disqualify the member in the constitution with the members of the State Legislature. Therefore, the option 'C' are incorrect.
103	D	130	D	9	D	41	D	All the options of one two three are correct regarding schedule tribe.
104	B	131	C	10	D	42	A	The idea of Fundamental Rights have been taken from U.S.A
105	C	132	D	1	A	43	B	Untouchability has been abolished under article 17 of the Constitution of India.
106	A	133	B	2	C	44	D	Under article 216 the President has the power to determine the number of the Judges in a High Court.
107	C	134	D	3	A	45	B	The fifth schedule of the Indian Constitution deals with the Scheduled tribe.

Series-A		Series-B		Series-C		Series-D		Remarks
Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	
108	B	135	B	4	B	46	B	In the year 1973 for the first time the doctrine of "Basic structure" of the constitution was dealt by the Supreme Court of India.
109	A	126	B	5	C	47	D	The communist party of India was founded in 1925. The Communist Party of India (Marxist) was founded in 1964. The Bahujan Samaj Party was founded in 1984. All India Trinamul Congress was founded in 1988. Hence option 'A' is correct answer.
110	C	127	C	6	C	48	C	Article 120 (1) the Speaker can allow any member of the House to speak in mother tongue.
111	D	141	D	19	D	62	D	The Foreign Exchange Reserves of RBI includes FCA, Gold, SDR and RTP i.e. all of the above.
112	D	142	D	20	D	63	D	All the four statements are true regarding rules of Origin.
113	C	143	D	21	A	64	B	IMR is expressed in 1000 live births so first statement is wrong. Madhya Pradesh has the highest IMR in 2019. So the correct statements are 2 and 3.
114	D	144	A	22	B	65	C	Human capital formation as a concept is better explained in statement 4.
115	C	145	D	23	A	51	B	According to insolvency and Bankruptcy code 2016 only fourth statement is true.
116	A	146	B	24	C	52	D	Industrial Policy Resolution was adopted in 1956.
117	D	147	A	25	B	53	C	The PLI scheme does not categorise the applicants into global and domestic Categories so statement 2 is false statement 3 is also false as average incentive of 8% is not true and also the period of six years for eligibility of companies is wrong. So statement 2 & 3 are incorrect.
118	B	148	C	11	D	54	A	Statement 1 and 3 are incorrect regarding the SVAMITVA Scheme.
119	A	149	B	12	C	55	C	According to Article 360 (4) (a) (i) (ii) and 360 (4) (b) statements 1, 3 and 4 are correct respectively.

Series-A		Series-B		Series-C		Series-D		Remarks
Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	
120	D	150	A	13	B	56	C	All the four statements could potentially contribute to stagflation in the Indian economy.
121	D	136	A	14	B	57	C	As per the Economic Survey 2023 only statement 4 is correct.
122	Deleted	137	Deleted	15	Deleted	58	Deleted	According to 2011 Census the population of Gaya District was 43 lakh (4391418). According to the population estimates and projections from the latest revision of the UN World Urbanization Prospects, Gaya's 2023 population is now estimated at 598,345. These estimates represent the Urban agglomeration of Gaya, which typically includes Gaya's population in addition to adjacent suburban areas. But according to estimates as per aadhar uidai.gov.in Dec 2023 data, the current population is estimated to be 6,104,072. So, in view of varying estimates and in the absence of any recent census data, there is no authentic data about current population. Hence the question is deleted.
123	A	138	B	16	C	59	C	Interest payments come under non-plan expenditure while expenditure on science and technology and agriculture are plan expenditure.
124	C	139	A	17	B	60	A	Option 'A' and 'B' are true and option 'C' is false.
125	A	140	B	18	C	61	C	Statement 1 is true and statement 2 and 3 are false.
126	C	4	C	33	C	79	C	Statements 1, 2 & 3 are all correct.
127	B	5	C	34	A	80	B	Batak(h) Mian Ansari saved Gandhi's life when an attempt was made to poison him.
128	C	6	D	35	A	66	B	Swami Sahajanand Saraswati organized the Bakasht movement during 1937-38.
129	B	7	C	36	D	67	A	The correct chronological sequence is 2, 4, 1,3.
130	D	8	A	37	B	68	C	Lord Lytton is not associated with the Ilbert Bill. It was proposed during the tenure of Lord Ripon.
131	A	9	B	38	C	69	D	The Treaty of Allahabad (1765) was signed after the battle of Buxar (1764).

Series-A		Series-B		Series-C		Series-D		Remarks
Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	
132	B	10	C	39	D	70	A	The Dutch East India Company established its first Factory at Patna in 1632.
133	C	11	D	40	A	71	B	Gandhi took recourse to a hunger strike for the first time during the Ahmadabad Mill Strike for mediation between mill-owners and striking employees.
134	B	12	C	26	D	72	A	Shri Krishna Singh, also known as Bihar Kesari, actively participated in the Quit India Movement (1942).
135	C	13	D	27	A	73	B	During the Champaran movement, the British Govt. set up the Champaran Agrarian Committee to look into the grievances of the peasants.
136	A	14	B	28	C	74	D	The correct match is a-2, b-1, c-3.
137	C	15	D	29	A	75	B	Ambabai, the woman freedom fighter belonged to Karnataka.
138	C	1	A	30	B	76	A	J. Andrew was not a member of the Cabinet Mission.
139	B	2	C	31	A	77	B	Lala Lajpat Rai referred to the safety valve theory in his comment on the foundation of the Indian National Congress.
140	C	3	A	32	B	78	A	The resolution on Fundamental Rights was passed for the first time at the Karachi session (1931) of the Indian National Congress.
141	C	19	D	46	A	89	B	
142	D	20	A	47	B	90	C	
143	B	21	A	48	B	81	A	
144	D	22	A	49	B	82	C	Correct Answer is D since snowberry is a small genus of about 15 species of deciduous shrubs in the honeysuckle family and obviously has nothing to do with shoes. On the other hand, millinery is the business of making or selling women's hats and other articles.
145	B	23	C	50	D	83	A	
146	B	24	C	41	D	84	A	Correct Answer is 77 since middle column is 7 times the difference between left & right column.
147	D	25	A	42	B	85	C	

Series-A		Series-B		Series-C		Series-D		Remarks
Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	
148	A	16	B	43	C	86	D	As per code language used in the question VIGOROUS will be written as 22187121812619 since alphabets are numbered serially either in forward sequence or in reverse sequence. Alternatively, one can quickly solve it by the process of elimination. Since "O" comes twice in VIGOROUS and its value is 12 from the code for MONK, so the answer is "A" since only in this option 12 comes twice.
149	C	17	D	44	A	87	B	
150	A	18	B	45	C	88	C	If $1/\sqrt{2}$ is x, then N is x km East and x km south of O while P is 2km south of O. So, P is x km west & 2-x km south of N. Since N is 4 km south of M, so P is x km west & 4+2-x km south of M. So, the distance between P & M is hypotenuse of right-angle triangle with sides x and 6-x. So the correct answer is "A". Even intuitively, this has to be less than x+(6-x) as sum of two sides of a triangle is always larger than the third side.