1504593

DI 2014

Test Form No. टेस्ट फार्म संख्या 999 KP 0

Time Allowed: 2 Hours निधारित समय : 2 घंटे

Maximum Marks: 200

अधिकतम अंक : 200

Read the following instructions carefully before you begin to answer the questions.

This Booklet contains questions in English as well as in Hindi. प्रश्नों के उत्तर देने से पहले निम्नलिखित अनुदेशों को ध्यान से पढ़ लें। इस पुस्तिका में प्रश्न अंग्रेजी तथा हिन्दी दोनों में दिये गये हैं।

- INSTRUCTIONS TO CANDIDATES 1. This Booklet contains 200 questions in all comprising the following
 - Part A : General Intelligence & Reasoning (50 Questions)
 Part B : General Knowledge and
 - General Awareness Part - C : Quantitative Aptitude
 - (50 Questions) Part - D : English Comprehension (50 Questions)
- 2. In questions set bilingually in English and Hindi, in case of discrepancy, the English version will prevail.
- 3. All questions are compulsory and carry equal marks.
- The paper carries negative marking. 0.25 marks will be deducted for each wrong answer.
- 5. Before you start to answer the questions you must check up this sooklet and ensure that it contains all the pages (1-32) and see that no page is missing or repeated. If you find any defect in this Booklet, you must get it repixeed immediately.
- 6. You will be supplied the Answer Sheet separately by the Invigilator. You must complete and code the details of Name, Roll Number, Ticket Number, Date of birth and Test Form Number on Side-I of the Answer Sheet carefully. You must also put your signature and Left-Hand thumb impression on the Answer Sheet at the prescribed place before you actually start answering the questions. These instructions must be fully complied with, falling which, your Answer Sheet will not be evaluated and you will be awarded 'ZERO'
- 7. Answers must be shown by completely blackening the corresponding ovals on Side-II of the Answer Sheet against the relevant question number by Black/Blue Ball-point Pen only. Answers which are not shown by Black/Blue Ball-point Pen will not be awarded any mark.
- 8. A machine will read the coded information in the OMR Answer Sheet. In case the information is incomplete or different from the information given in the application form, such candidate will be awarded 'ZERO' mark.
- The Answer Sheet must be handed over to the Invigilator before you leave the Examination Hall.
- 10. Failure to comply with any of the above Instructions will render a candidate liable to such action/penalty as may be deemed fit.
- 11. The manner in which the different questions are to be answered has been explained at the back of this Booklet (Page No. 32), which you should read carefully before actually answering the questions.
- 12. Answer the questions as quickly and as carefully as you can. Some questions may be difficult and others easy. Do not spend too much time on any question.
- 13. No rough work is to be done on the Answer Sheet. Space for rough work has been povided below the questions.
- 14. "Mobile phones and wireless communication devices are completely banned in the examination halis/rooms. Candidates are advised not to keep mobile phones/any other wireless communication devices with them even switching it off, in their own interest. Failing to comply with this provision will be usidered as using unfair means in the examination and ction will be taken against them including cancellation of their candidature and future debarrment from appearing in eraminations conducted by Staff Selection Commission."

उम्मीदवारों के लिए अनुदेश

- इस पुश्लिका में कुल 200 प्रश्न हैं, जिनमें निम्नतिशित चार मान शामिल हैं; भाग - क : सामान्य बुद्धियता एवं तर्कशक्ति (50 TIPT)
 - भाग ख : सामान्य ज्ञान एवं सामान्य जानकारी (50 সম্প)
 - भाग ग ; संख्यात्मक अभिकृषि (50 प्रभा) (50 mer) भाग - भ : अनेजी परिज्ञान
- अग्रेजी और हिन्दी माथा में तैवार विरुए कर दिवाणी प्रश्नों में कोई विसंवति होने. की निवित्ति में अंग्रेजी विकास मान्य होगा ।
- समी प्रश्न अनिवार्य हैं तथा सबके बसाबर अंक हैं।
- प्रथम पत्र में नकारमध्यक अंकन होता । हर मनत उत्तर के लिए 0-25 अंक फाटा
- 5. प्रश्नों के उत्तर देने से पहले आप इस पुस्तिका की जांच करके देख लें कि इसमें पूरे पृष्ठ (1-32) हैं तथा कोई पृष्ठ कम या दुबारा तो नहीं आ गया है । यदि आप इस पुस्तिका में कोई त्रृटि पायें, तो तत्काल इसके बदले दूसरी परितंका से में।
- निर्देशक द्वारा आवको उत्तर-पश्चित अत्तर से दी अधेनी । उत्तर-पश्चिक के Side-1 में विद्यापार्थों के अनुसार ध्वानपूर्वक अपना नाम, रोख नम्बर, टिकट नम्बर, जन्म तिथि और टेस्ट कार्म संख्या अवस्य विखें । प्रश्नों के उत्तर वास्तव में शह बड़ने से पहले उत्तर-पत्रिका पर निर्धारित स्थान में आप अपने हस्ताधर एवं बार्षे हाम के अंगुरे का निशान भी अगस्य लगाएँ । उपर्युक्त अनुदेशों का पूरी तरह अनुपासन किया जाए, अन्यारा आपकी उत्तर-पत्रिका को जांचा नहीं जायेगा और 'भूम्य' अंक दिया आएमा ।
- उत्तर-पत्रिका में सभी उत्तर Side-II में प्रश्न संख्या के सामने दिये गये सम्बन्धित अण्डाकार खानीं को केवल काला/नीला कांल-पाइंट पेन से पूरी तरह काला करके दिखाएं। जो अण्डाकार खाले काला/नीला बॉल-पॉइंट पैंन से मही भरे जाएंगे, उनके लिए कोई अंक नहीं दिया जाएगा।
- ओ.एम.आर. उत्तर-पत्रिका में मरी गई कुट मुख्ता को एक मलीन पहेनी।
 मदि सुबना अनूर्व है अथवा आवेदन प्रथम में दो गई सुबना से भिन्न है, तो ऐसे अभ्यपी को 'शृन्य' अंक दिवा जाएगा ।
- 9. परीक्षा-मधन छोड़ने से बहते परीक्षार्थी को उत्तर-पत्रिका निरीक्षक के हवाले कर देनी चाहिए।
- 10. ऊपर के अनुदेशों में से किसी एक का भी पालन न करने पर उम्मीदबार पर विवेकानमार कार्यवाही की जा सकती है या दण्ड दिया जा सकता है।
- विभिन्न प्रवर्गों के उत्तर देने की विधि इस पुस्तिका के पीछे (पृष्ठ संख्या 32) में छपे हुए निर्देशों में दे दी गई है, इसे आप प्रश्नों के उत्तर देने से पहले ध्यानपूर्वक पढ़ से ।
- प्रश्नों के उत्तर जितनी जन्दी हो सके तथा प्यानपूर्वक दें । वृत्त प्रश्न आसान समा वृत्व कठिन हैं । किसी एक प्रश्न पर बहुत अधिक समय ने लगाएं ।
- कोई रफ कार्य उत्तर-पत्रिका पर नहीं करना है। रफ कार्य के लिए स्थान प्रश्नों के निचे दिया गया है।
- "परीक्षा जालों / कमरों में मोबाइल फोन तथा बेतार संचार साधन पूरी तरह निविद्ध हैं। प्रत्याशियों को उनके अपने हित में सलाह दी जाति है कि मोबाइल फोन/किसी अन्य बेतार संचार साधन को स्विच आंफ करके मी अपने पास न रखें। इस प्रावधान का अनुपासन न करने को परीक्षा में अमुचित उपायों का प्रयोग माना जाएगा और उनके विरुद्ध कारवाई की जाएगी, उनकी अम्पर्धिता रह कर देने सहित मविष्य में कर्मचारी चयन आयोग द्वारा आयोजित की जाने वासी परीक्षाओं में सम्मिसित होने से भी वंचित किया जायेगा ।"

इस पुस्तिका की सील तब तक न खोलें जब तक कहा न जाए

PART - A : GENERAL INTELLIGENCE & REASONING

Directions: In question nos. 1 to 7, select the related word/letter/number/figure from the given alternatives.

- 1. Saint : Meditation :: Scientist : ?
 - (A) Research
- (B) Knowledge
- (C) Spiritual
- (D) Rational
- 2. King: Palace:: Eskimo:?
 - (A) Caravan
- (B) Asylum
- (C) Monastery
- (D) Igloo
- 3. AFKP : DINS :: WBGL : ?
 - (A) ORUX
- (B) OSWA
- (C) OTYD
- (D) OQSU
- 4. SINGER : QGLECP :: MONSTER : ? (A) KLNSCP

 - (C) KMLRCP
- (B) KLMSCP (D) KLMTDO
- 5. 18 : 5 :: 12 : ?
 - (A) 4
- (B) 10 (C) 3
- (D) 6

- 6. 12 : 20 :: 2
 - (A) 15:37
- (B) : 16:64
- (C):27:48
- (D) 30:42
- 7. Question figures







Answer figures









- (C) 8. In the following questions number of letters skipped in between adjacent letters in the series increased by one. Which of the following series observe the rule?
 - (A) KORYBGJ
- (B) LMEYTPK
- (C) KMPTYEL
- (D) KPTYELM
- 9. In the following letter series how many Ms are followed by N, but not preceded by N? NMWVMNMVWNMNMMNWVMN
 - (A) I
- (B) 2
- (C) 3
- (D) 4

- Directions: In question nos. 10 to 14, find the odd word/letters/number pair/figure from the given alternatives.
 - 10. (A) Tennis
- (B) Cricket (D) Football
- (C) Volleyball 11. (A) artificial
- (B) insincere
- (C) affected
- (D) naive
- 12. (A) 68
- (B) 85 (D) 174
- (C) 153 13. (A) 7:98
- (B) 9:162
- (C) 12:288

(A)

- (D) 17:572
- 14.







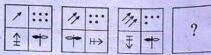
- 15. Which one of the given responses would be a meaningful order of the following?
 - 1. Orange 2. Indigo 3. Red 4. Blue
 - 5. Green 6. Yellow 7. Violet
 - (A) 7, 2, 4, 5, 6, 1, 3
 - (B) 7, 2, 4, 6, 5, 1, 3
 - (C) 7, 2, 6, 4, 5, 1, 3
 - (D) 7, 2, 6, 4, 1, 5, 3
- 16. Arrange the following words as per order in the dictionary.
 - Forecast
 Forget
 Foreign
- 4. Forsook 5. Force
- (A) 3, 5, 1, 2, 4 (B) 5, 1, 3, 2, 4
- (C) 5, 1, 3, 4, 2 (D) 5, 1, 2, 3, 4 17. Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?

rtx sx z txy yz

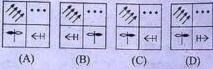
- (A) yyrxs
- (B) yysxr
- (C) yyrsx
- (D) yyxrs

Directions: In question nos. 18 to 21, a series is given with one term missing. Choose the correct, alternative from the given ones that will complete the series.

- 18. FAG, GAF, HAI, IAH,
 - (A) JAK (C) JAI
- (B) HAK
- (D) HAL
- 19. 3, 6, 9, 15, 24, 39, 63, ? (A) 100
 - (B) 87
 - (C) 102
- (D) 99
- 20. -1, 0, ?, 8, 15, 24
 - (A) 4 (B) 3
 - (D) I (C) 2
- 21. Question figures



Answer figures



- 22. Govind is 48 years old. He is twice as old as his son Prem is now. How old was Prem seven years before?

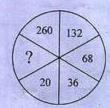
 - (A) 16 (B) 17 (C) 13
- (D) 18
- 23. Pointing to a man, a lady said "His mother is the only daughter of my mother". How is the lady related to the man?
 - (A) Mother
- (B) Daughter
- (C) Sister
- (D) Aunt
- 24. Five policemen are standing in a row facing south. Shekhar is to the immediate right of Dhanush. Bala is between Basha and Dhanush. David is at the extreme right end of the row. Who is standing in the middle of the row?
 - (A) Bala
- (B) Basha
- (C) Shekhar
- (D) Dhanush

- 25. From the given alternatives select the word which can be formed using the letters given in the word. ULTRANATIONALISM
 - (A) ULTRAMONTANE

 - (B) ULTRAMODERN
 - (C) ULTRAIST
 - (D) ULULATE
- 26. From the given alternatives select the word which cannot be formed using the letters of the given word. LEGALIZATION
 - (A) ALERT
- (B) ALEGATION

(D) NATAL

- (C) GALLANT
- 27. In a certain code DEPUTATION is written as ONTADEPUTI. How is DERIVATION written in that code?
 - (A) ONVADERITI (C) ONVAEDIRII
- (B) ONDEVARITI
- (D) ONVADEIRIT 28. If MADRAS is coded as 517916 and TENANT is coded as 432121, how would you encode RMATSN?
 - (A) 851353
- (B) 951363
- (C) 951462
- (D) 941562
- 29. Find the missing number from the given responses.



- (A) 12
- (B) 10 (C) 9
- (D) 8
- 30. If '-' stands for '+', '+' stands for 'x'. 'x' stands for '-' then which one of the following is not correct?
 - (A) $22 + 7 3 \times 9 = 148$
 - (B) $33 \times 5 10 + 20 = 228$
 - (C) $7 + 28 3 \times 52 = 127$
 - (D) $44 9 + 6 \times 11 = 87$

31. Some equations are solved on the basis of a certain system. Find the correct answer for the unsolved equation on that basis.

32. Select the correct combination of mathematical signs to replace signs and to balance the following equation.

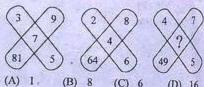
Directions: In question nos. 33 and 34, select the missing number from the given responses.

3	3	

7	9	8
2	4	3
5	7	6
16	32	?

- (A) 17
- (B) 23
- (C) 47
- (D) 73

34.



- (D) 16 35. A person walks towards his house at 8:00 am and observes his shadow to his right. In which direction he is walking?
 - (A) North
- (B) South
- (C) East
- (D) West
- 36. A boat moves from a jetty towards East, After sailing for 9 nautical miles, she turns towards right and covers another 12 nautical miles. If she wants to go back to the jetty, what is the shortest distance now from her present position?
 - (A) 21 nautical miles (B) 20 nautical miles
 - (C) 18 nautical miles (D) 15 nautical miles

37. Find out the number of triangles in the given



- (A) 13
- (B) 15
 - (C) 16
- (D) 17
- 38. Four positions of a dice are given below, Identify the number at the bottom when top is 6.

Question figures

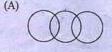


- (A) 1
- (B) 3
- (C) 4
- (D) 5

(D) 2

39. Identify the diagram that best represents the relationship among classes given below:

Food, Curd, Spoons

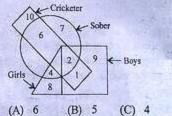








40. In the following figure, the boys who are cricketer and sober are indicated by which number?



Directions: In question nos. 41 and 42, some three/two are given followed by three/two conclusions/assumptions respectively. You have to consider the statements to be true even if they seem to be attempted to be true seem to be at variance from commonly known facts. You have facts. You have to decide which of the given conclusions/assumptions if any, follow from the given statements.

41. Statement

: Pictures cari tell a story. All story books have pictures. Some story books have

Conclusions :

words I. Pictures can tell a story better than words can.

II. The stories in story books are very simple.

III. Some story books have both words and pictures.

(A) Only conclusion I follows (B) Only conclusion II follows

(C) Only conclusion III follows

(D) Both conclusions I and II follow

42. Statement : It is desirable to put the child in school at the age of 5 or so.

Assumptions: I. At that age the child reaches appropriate level

of development and is ready to learn. II. The schools do not admit

children after 6 years of age.

(A) Only assumption I is implicit

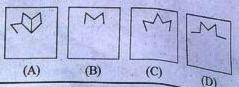
(B) Only assumption II is implicit
(C) Neither assumption I nor II is implicit

(D) Both assumption I and II are implicit

43. Which answer figure will complete pattern in the question figure? Question figure



Answer figures



44. From the given answer figures, select the one in which the question figure is hidden/

Ouestion figure



Answer figures









(A)

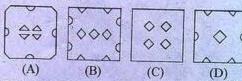
(B)

45. A piece of paper is folded and cut as shown below in the question figures. From the given answer figures, indicate how it will appear when opened.

Question figures



Answer figures

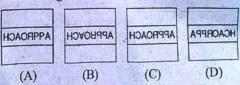


46. If a mirror is placed on the line MN, then which of the answer figures is the right image of the given figure?

Question figure



Answer figures



47. A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alternatives are represented by two classes. I are the columns and rows of Matrix I are numbered from 0 to 4 and that of Matrix II are numbered from 5 to 9. A letter from these matrices can be represented first by its row and next by its column, e.g., 'A' can be represented by 40, 01, 13, 32 etc., and 'N' can be represented by 56, 68, 89 etc. Similarly, you have to identify the set for the word given below:

SIX-KIDS.

	Tradity A					
	Q	0	1	2	3	4
	4	A	F	K	P	U
	3	F	K	Α	U	P
d	2	P	U	F	K	A
ĺ	1	K	P	U	Α	F
ì	0	U	٨	P	F	K

Matrix I

Matrix II

1		5	6	7	8	9
-	9	D	1	N	S	Х
	8	X	S	I	D	N
1	7	N	Х	S	I	D
1	6	S	D	Х	N	1
	5	1	N	D	Х	S

- (A) 86, 87, 99 40, 41, 86, 64
- (B) 98, 96, 85 42, 78, 88, 77
- (C) 77, 69, 76 22, 95, 28, 31
- (D) 65, 55, 67 05, 25, 91, 40
- 48. A student is caught cheating in her test.

 What would you do in this situation?
 - (A) Warn her and let her off
 - (B) Warn her and give her counselling
 - (C) Tell her parents
 - (D) Put up her name on the board

49. An address has been given below, which has been reproduced against A, B, C and D alternatives. Three of these have some mistake or the other. Identify the one without any mistake.

FG EUROFRED LIMITED Centennial Park, Centennial Avenue, Elstree, Hertfordshire United Kingdom WD6 3SG

- (A) FG EUROFRED LIMITED Cenetennial Park, Elstee, Hertfordshre, United Kingdom WD6 3SG
- (B) FG EUROFRED LIMITED Cenetennial Park Centennial Avenue, Elstree, Hertforbshire United Kingdom WD6 3SG
- (C) FG EUROFRED LIMITED Centennial Park, Centennial Avenue, Elstree, Hertfordshire United Kingdom WD6 3SG
- (D) FG EUROFRED LIMITED Centeninal Park, Centeninal Avenue, Elstee, Hertfordshire United Kingdom WD6 3SG
- 50. Given below are numbers in the first line and symbols in the second line. Numbers and symbols are code for each other. Choose the correct code for given symbols.

Which number can be decoded from the following:

≠ □ ↑ × →

- (A) 5 8 6 3 7
- (B) 5 6 8 7 3
- (C) 5 7 8 6 3
- (D) 5 8 3 6 7

PART - B : GENERAL KNOWLEDGE AND GENERAL AWARENESS

- 51. In the balance of payments account, unrequited receipts and payments are also regarded as
 - (A) bilateral transfers
 - (B) unilateral transfers
 - (C) capital account transfers
 - (D) invisible transfers
- 52. Price and output are determinates in market structure other than
 - (A) monopoly
 - (B) perfect competition
 - (C) oligopoly
 - (D) monopsony
- 53. A philosophy that the worker should share in industrial decisions is termed as
 - (A) industrial democracy
 - (B) worker sovereignty
 - (C) industrial socialism
 - (D) worker dictatorship
- 54. If average cost falls, marginal cost
 - (A) increases at a higher rate
 - (B) falls at the same rate
 - (C) increases at a lower rate
 - (D) falls at a higher rate
- 55. Which one of the following disburses long term loans to private industry in India?
 - (A) Food Corporation of India
 - (B) Life Insurance Corporation of India
 - (C) Primary Credit Society
 - (D) Land Development Banks
- 56. Most important safeguard of liberty is
 - (A) bold and impartial judiciary
 - (B) well-knit party system
 - (C) decentralisation of power
 - (D) declaration of rights
- 57. What is the ancient school of law?
 - (A) The Philosophical school
 - (B) The Historical School
 - (C) The Analytical School
 - (D) The Sociological School

- 58. Liberty stands for
 - (A) absence of restraint
 - (B) consists in the presence of restraint
 - (C) feeling enjoyed in a congenial atmos-
 - (D) the eager maintenance of that atmos. phere in which men have the opportunity to be their best selves - Laski
- 59. When the Vice-President is acting as President he
 - I. will have all powers and functions of both President and Vice-President
 - II. gets all the allowances and privileges of the President
 - III, should continue to work as the Chairman of the Rajya Sabha
 - (A) I, II and III
- (B) I and III
- (C) I and II
- (D) II only
- 60. In Presidential Government, the President is
 - (A) independent of the Legislature
 - (B) dependent on the Legislature
 - (C) dependent on the Judiciary
 - (D) bound by the advice of the Council of Ministers
- 61. The method of amending the Constitution by popular veto is found in
 - (A) Britain
- (B) Switzerland
- (C) Russia
- (D) India
- 62. Which of the following is the inalienable attribute of the parliamentary system of government?
 - (A) Flexibility of the Constitution
 - (B) Fusion of Executive and Legislature
 - (C) Judicial Supremacy
 - (D) Parliamentary Sovereignty
- 63. Which one of the following kinds of equality is not compatible with the liberal notion of equality ?
 - (A) Legal Equality (B) Political Equality
 - (C) Social Equality (D) Economic Equality
- 64. Which was the second capital of Akbar?
 - (A) Delhi
- (B) Agra
- (C) Fateh-pur-Sikri (D) Patna

- 65. The first country which discovered sea route to India was (A) Portugal (B) Dutch (C) French (D) Britain 66. The unification of Kamataka was achieved in the year (A) 1956
- (C) 1958 (D) 1960 67. Who introduced the Indian University Act ? (A) Lord Curzon
 - (B) Lord Minto (C) Lord Morelay (D) Lord Rippon
- 68. Chinese travellers visited India primarily because
 - (A) they were interested in Buddhism
 - (B) they were invited by the Indian kings (C) they were interested to study Indian culture
 - (D) they were interested to stay in India
- 69. The first short based integrated steel plant in the country is
 - (A) Vijaynagar

(B) Salem

(B) 1957

(C) Vishakapatnam (D) Bhadravati

- 70. Name the condition which influences the development of plants into distinctive forms.
 - (A) Climatic conditions
 - (B) Soil conditions
 - (C) Environmental conditions
 - (D) Social conditions
- 71. Agriculture should serve as an instrument of income, livelihood and opportunity to the local community - this statement is given by
 - (A) Dr Madhavan Nair
 - (B) Dr Manmohan Singh
 - (C) Dr Abdul Kalam
 - (D) Dr M S Swaminathan
- 72. When was the Geological Survey of India established?
 - (A) 1841

(B) 1851

(C) 1941

(D) 1951

- 73. Development that meets the needs of the present, without compromising the ability of future generations to meet their own needs was the focal point of Brundtland Commission is
 - (A) sustainable development
 - (B) mitigation
 - (C) disaster management
 - (D) capacity building

- 74. The pancreas secretes
 - (A) Insulin
- (B) Bile juice
- (C) Peptic juice
- (D) None of these
- 75. When we touch leaves of "Touch me not plant", they close, these movements are called
 - (A) photonastic movements
 - (B) nyctinastic movements
 - (C) seismonastic movements
 - (D) chemonastic movements
- 76. The concept of tissue culture was introduced by
 - (A) Halfmeister

(B) Hanstein

(C) Haberlandt

(D) Hanning

- 77. Beak is formed by
 - (A) cheeks
- (B) jaws
- (C) teeth (D) none 78. Pinna (external ear) is present in
 - (A) Amphibian
- (B) Fish
- (C) Mammal
- (D) Reptile
- 79. Purity of a metal can be determined with the help of
 - (A) Pascal's law
 - (B) Boyle's law
 - (C) Archimedes principle
 - (D) Conservation of mass principle
- 80. If both the mass and the velocity of a body is increased to twice of their magnitude, the kinetic energy will increase by
 - (A) 2 times
- (B) 4 times
- (C) 8 times
- (D) 16 times
- 81. Two bodies kept at a certain distance feel a gravitational force F to each other. If the distance between them is made double the former distance, the force will be
 - (A) 2F
- (B) 1F
- (C) 4F
- (D) 1F
- 82. Stationary wave is formed by
 - (A) a transverse wave superposing a longitudinal wave
 - (B) two waves of the same speed super-
 - (C) two waves of same frequency travelling in the same direction
 - (D) two waves of same frequency travelling in the opposite direction

- 83. Which is not an extension of a picture file on a computer ? (A) .jpeg (B) .png (D) ..mdb (C) .gif 84. Which measure of memory is the largest? (A) MB Megabyte (B) GB Gigabyte (D) KB Kilobyte (C) TB Terabyte 85. Which of the following is the maximum number of electrons that can be present in M-shell? (D) 32 (A) 2 (B) 8 (C) 18 86. In an oxygen molecule, two atoms are united by (A) one bond (B) two bonds (C) three bonds (D) four bonds 87. The inert gas which is substituted for nitrogen in the air used by deep sea divers for breathing is (A) Neon (B) Krypton (C) Argon (D) Helium 88. How many neutrons are there in 92U238 atom ? (A) 92 (B) 238 (C) 146 (D) 330 89. Root pressure is measured by (A) Barometer (B) Atmometer (C) Manometer (D) Auxanometer 90. Cell becomes turgid because of (A) Plasmolysis (B) Exosmosis (C) Endosmosis (D) Diffusion 91. The process of imbibition involves
- 94. Which Indian University bagged Best Research Award at 100th Indian Science Congress ? (A) University of Delhi (B) University of Kashmir (C) University of Mumbai (D) University of Sikkim
- 95. Who was the first woman winner of Kaun Banega Crorepati 6 ?
 - (A) Kiran Bedi
 - (B) Lata Mangeshkar
 - (C) Sumeet Kaur Sawhney
 - (D) Priety Zinta
- 96. Who was appointed new United State Defence Secretary in January 2013 ?
 - (A) Donald Rumsfeld
 - (B) Robert M Gates
 - (C) Leon Panetta
 - (D) Chuck Hagel
- 97. Who took the charge as new Deputy Governor of Reserve Bank of India in January 2013?
 - (A) Urijit Patel
 - (B) Dr C Rangarajan
 - (C) S Vekitaramanam
 - (D) Dr Y Venugopal Reddy
- 98. Which political leader was sent to jail for teacher recruitment scam in January 2013 ?
 - (A) Om Prakash Chautala
 - (B) D V Sadananda Gowda
 - (C) Raja Bhaiya
 - (D) Suresh Kalmadi
- 99. Which player got stripped of his seven Tour de France titles and got banned for life after the International Cycling Union ?
 - (A) Nicola Adams
 - (B) Chris Hoy
 - (C) Lance Armstrong
 - (D) Jason Kenny
- 100. Who won the Top Ranker's Entrepreneurial Path Breaker Award 2013 ?
 - (A) Prof D K Bandyopadhyay
 - (B) Ajay Shankar
 - (C) B Prasada Rao
 - (D) Pratip Chaudhuri

(A) Diffusion

(C) Absorption

(A) Hypertonic solution

(B) Hypotonic solution

(C) Isotonic solution

(D) None of these

5th January, 2013?

(B) Shivraj Patil

(C) K S Hegde

(D) P A Sangma

(A) Somnath Chatterjee

placed in

92. A cell increases in volume when it is

93. Who launched National Peoples Party on

(B) Capillary action

(D) Both (A) & (B)

PART - C: QUANTITATIVE APTITUDE

101. Evaluate
$$\frac{\sqrt{24} + \sqrt{6}}{\sqrt{24} - \sqrt{6}}$$

- (A) 2
- (B) 3
- (C) 4
- (D) 5
- 102. Three tankers contain 403 litres, 434 litres, 465 litres of diesel respectively. Then the maximum capacity of a container that can measure the diesel of the three container exact number of times is
 - (A) 31 litres
- (B) 62 litres
- (C) 41 litres
- (D) 84 litres
- 103. The value of

$$3 + \left[\left(8 - 5\right) + \left\{ \left(4 - 2\right) + \left(2 + \frac{8}{13}\right) \right\} \right]$$
 is

- (A) $\frac{15}{17}$ (B) $\frac{13}{17}$
- (C) 15
- (D) 13 10
- 104. If '+' means '+', 'x' means '+' means 'x' and '-' means '+', what will be the value of the following expression?

$$9 + 3 \div 4 - 8 \times 2 = ?$$

- (A) $6\frac{1}{4}$
- (B) 63
- (C) $-1\frac{3}{4}$
- (D) 18
- 105. The next term of the sequence,

$$(1+\frac{1}{2})$$
, $(1+\frac{1}{2})(1+\frac{1}{3})$, $(1+\frac{1}{2})(1+\frac{1}{3})(1+\frac{1}{4})$,

- (A) 3
- (B) $(1+\frac{1}{5})$
- (C) 5
- (D) $\left(1+\frac{1}{2}\right)\left(1+\frac{1}{5}\right)$

- 106. A can do $\frac{7}{8}$ of work in 28 days, B cando 5 of the same work in 20 days. The number of days they will take to complete if they do it together is

 - (A) $15\frac{3}{7}$ days (B) $17\frac{3}{5}$ days

101.

102

10

- (C) 145 days (D) 135 days
- 107. Seventy-five men are employed to lay down a railway line in 3 months. Due to certain emergency conditions, the work was to be finished in 18 days. How many more men should be employed to complete the work in the desired time?
 - (A) 300
- (B) 325
- (C) 350
- (D) 375
- 108. A trader who marks his goods up to 50% offered a discount of 20%. What % profit the trader makes after offering the payment?
 - (A) 30%
- (B) 70%
- (C) 20%
- (D) 50%
- 109. A retailer buys a sewing machine at a discount of 15% and sells it for ₹ 1955. Thus he makes a profit of 15%. The discount is
 - (A) ₹270
- (B) ₹290
- (C) ₹300
- . (D) ₹310
- 110. If x:y :: 2:3 and 2:x :: 4:8 the value of y is
 - (A) 6
- (B) 8
- (C) 4
- (D) 12

111. ₹730 were divided among A, B, C in such a way that if A gets < 3, then B gets ₹4 and if B gets ₹ 3.50 then C gets ₹ 3. The share of B exceeds that of C by

(A) ₹30

(B) ₹ 40

(C) ₹ 70

(D) ₹210

112. A boy found that the average of 20 numbers is 35 when he writes a number '61' instead of '16'. The correct average of 20 numbers is

(A) 32.75

(B) 37-25

(C) 34·75

(D) 34-25

113. 11 friends went to a hotel and decided to pay the bill amount equally. But 10 of them could pay ₹60 each, as a result 11th has to pay ₹ 50 extra than his share. Find the amount paid by him.

(A) ₹ 105

(B) ₹ 110

(C) ₹ 115

(D) ₹ 120

114. A tea-merchant professes to sell tea at cost price but uses a false weight of 900 gram for a kilogram. The profit percent in his transaction is

(A) 11½%

(B) 10%

(C) 91% (D) 15%

115. Mahesh earned a profit of 20% by selling 60 apples at the rate of ₹42.50 for 5 apples. Then the total cost, at which the apples were bought is

(A) ₹ 452

(B) ₹ 425

(C) ₹ 450

(D) ₹ 485

116. In an examination 75% candidates passed in English and 60% passed in Mathematics. 25% failed in both and 240 passed the examination. Find the total number of candidates.

(A) 492

(B) 300

(C) 500

(D) 400

117. If 40% of $\frac{4}{5}$ of $\frac{3}{4}$ of a number is 48, then what is 1% of the same number?

(A) 20

(B) 2

(C) 10

(D) 1

118. A student goes to school at the rate of 5/2 km/hr and reaches 6 minutes late. If he travels at the speed of 3 km/hr, he reaches 10 minutes earlier. The distance of the school is

(A) 45 km

(B) 20 km

(C) 10 km

(D) 4 km

119. A train 50 metre long passes a platform 100 metre long in 10 sec. The speed of the train in km/hr is

(A) 10

(B) 54

(C) 15

(D) 100

120. A sum amounts double in 8 years by simple interest. Then the rate of simple interest p.a. is

(A) 10%

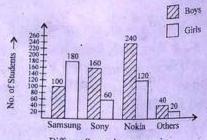
(B) 12.5%

(C) 15%

(D) 20%

- 121. Rekha invested a sum of ₹12000 at 5% She per annum compound interest. She received an amount of ₹13230 after n years. Find n.
 - (A) 2.8 years
- (B) 3.0 years
- (C) 2.5 years
- (D) 2.0 years

The bar chart representing the number of first year B. Com. students of St. Xavier's College using different companies' smart phones. Study bar chart and answer question nos. 122 to 125.



Different Smart phone companies

The bar chart representing the no. of students using different smart phones.

- 122. The ratio of the number of boys to the number of girls using the smart phones of Samsung and Sony together is
 - (A) 12:13
- (B) 13:12
- (C) 14:11
- (D) 11:14
- 123. What percentage of boys are using the smart phones of Samsung?
 - (A) 16.52%
- (B) 17-52%
- (C) 18-52%
- (D) 15.52%

- 124. What percentage of girls are using the smart phones of Nokia?
 - (A) 33.58%
- (B) 32-58%
- (C) 30·58%
- (D) 31.58%
- 125. The difference between the total number of students using smart phone of Samsung combined together and the total number of students using smart phone of Sony taken together is
 - (A) 20
- (B) 60
- (C) 80
- (D) 40
- 126. The radius of a right circular cone is 3 cm and its height is 4 cm. The total surface area of the cone is
 - (A) 48-4 sq.cm
- (B) 64·4 sq.cm
- (C) 96·4 sq.cm
- (D) 75·4 sq.cm
- 127. A wooden box of dimension 8 metre × 7 metre × 6 metre is to carry rectangular boxes of dimensions 8 cm × 7 cm × 6 cm. The maximum number of boxes that can be carried in 1 wooden box is
 - (A) 7500000
- (B) 9800000
- (C) 1200000
- (D) 1000000
- 128. Two circular cylinders of equal volume have their heights in the ratio 1:2; Ratio of their radii is (Take $\pi = \frac{22}{\pi}$)
 - (A) 1:4
- (B) 1:√2
- (C) √2:1
- (D) 1:2

13

- (A) 562
- (B) 412
- (C) 462
- (D) 362
- 130. A sphere is placed inside a right circular cylinder so as to touch the top, base and the lateral surface of the cylinder. If the radius of the sphere is R, the volume of the cylinder is
 - (A) $2\pi R^3$
- (B) $4\pi r^3$
- (C) $8\pi R^3$
- (D) $\frac{8}{3}\pi R^3$
- 131. If $a = \sqrt{6} + \sqrt{5}$ $b = \sqrt{6} \sqrt{5}$ then $2a^2 - 5ab + 2b^2 =$
 - (A) 38 (C) 40
- (B) 39 (D) 41
- 132. If $p = \frac{5}{18}$

then $27p^3 - \frac{1}{216} - \frac{9}{2}p^2 + \frac{1}{4}p$ is equal to

- (A) $\frac{4}{27}$ (B) $\frac{5}{27}$
- (C) $\frac{8}{27}$ (D) $\frac{10}{27}$
- 133. If $x + \frac{1}{x} = 2$, then $x^{2013} + \frac{1}{x^{2014}} = ?$
 - (A) 0
- (C) -1
- (D) 2
- 134. If a = 331, b = 336 and c = -667, then the value of $a^3 + b^3 + c^3 - 3abc$ is
 - (A) 1

(B) 6

- (C) 3
- (D) 0

135. The simplified value of

$$(\sqrt{6} + \sqrt{10} - \sqrt{21} - \sqrt{35})(\sqrt{6} - \sqrt{10} + \sqrt{21} - \sqrt{35})$$
 is

- (A) 13
- (C) 11
- (D) 10
- 136. In a $\triangle ABC$, $\frac{AB}{AC} = \frac{BD}{DC}$, $\angle B = 70^{\circ}$ and

$$\angle C = 50^{\circ}$$
, then $\angle BAD = ?$

- (A) 60°
- (B) 20°
- (C) 30°
- (D) 50°
- 137. In a Δ ABC, AD, BE and CF are three medians. The perimeter of AABC is always
 - (A) equal to $(\overline{AD} + \overline{BE} + \overline{CF})$
 - (B) greater than $(\overline{AD} + \overline{BE} + \overline{CF})$
 - (C) less than $(\overline{AD} + \overline{BE} + \overline{CF})$
 - (D) None of these
- 138. In a A ABC, AD, BE and CF are three medians. Then the ratio

$$(\overline{AD} + \overline{BE} + CF): (\overline{AB} + \overline{AC} + \overline{BC})$$
 is

- (A) equal to $\frac{3}{4}$ (B) less than $\frac{3}{4}$
- (C) greater than $\frac{3}{4}$ (D) equal to $\frac{1}{3}$
- 139. Two circles with radii 25 cm and 9 cm touch each other externally. The length of the direct common tangent is
 - (A) 34 cm
- (B) 30 cm
- (C) 36 cm
- (D) 32 cm

140. If AB = 5 cm, AC = 12 and $AB \perp AC$ then the radius of the circumcircle of AARC: A ABC is

(A) 6.5 cm

(B) 6 cm

(C) 5 cm

(D) 7 cm

141. If $0 \le \theta \le \frac{\pi}{2}$ and $\sec^2 \theta + \tan^2 \theta = 7$, then

(A) $\frac{5\pi}{12}$ radian (B) $\frac{\pi}{3}$ radian

(C) $\frac{\pi}{5}$ radian (D) $\frac{\pi}{6}$ radian

142. The simplest value of . $\sin^2 x + 2 \tan^2 x - 2 \sec^2 x + \cos^2 x$ is

(A) 1

(B) 0

(C) -1

(D) 2

143. A kite is flying at a height of 50 metre. If the length of string is 100 metre then the inclination of string to the horizontal ground in degree measure is

(A) 90 (C) 45

(B) 60 (D) 30

144. From the top of a light-house at a height 20 metres above sea-level, the angle of depression of a ship is 30°. The distance of the ship from the foot of the lighthouse is

(A) 20 m

(B) 20√3 m

(C) 30 m

(D) 30√3 m

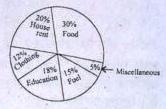
145. If $x = a \sin \theta$ and $y = b \tan \theta$ then prove

that $\frac{a^{2}}{x^{2}} - \frac{b^{2}}{v^{2}}$ is

(A) 1 (B) 2

(C) 3 (D) 4

The following pie-chart shows the monthly expenditure of a family on food, house rent, clothing, education, fuel and miscellaneous, Study the pie-chart and answer question nos, 146 to 150.



146. If the expenditure for food is ₹ 9000, then the expenditure for education is

(A) ₹ 5000

(B) ₹ 5200

(C) ₹ 5400

(D) ₹ 6000

147. The central angle of the sector for the expenditure on fuel (in degrees) is

(A) 50-4 (C) 57-6

(B) 54 (D) 72

148. If the expenditure on fuel is ₹ 3000, then the total expenditure excluding expenditure on house rent and education is

(A) ₹ 11600

(B) ₹ 12000

(C) ₹ 12400

(D) ₹ 12500

149. If the percentage of expenditure on food is x% of the total percentage of expenditure on clothing, education and fuel, then x equals

(A) 66

(B) 66¹/₃

(C) 66²

(D) 67

150. Total percentage of expenditure on house rent, clothing and fuel is greater than the percentage of expenditure on food by

(A) 16

(B) 17 (C) 18

(D) 20

PART - D : ENGLISH COMPREHENSION

parts of the sentences have errors and some are correct. Find out which part of a sentence has an error and blacken the oval [orresponding to the appropriate letter (A, B, C). If a sentence is free from error, blacken the oval corresponding to (D) in the Answer Sheet.

151.	In 1906 a earthqua	ke	destroyed much	
	(A) .		(B)	
	of San Francisco.		error.	
	(C)	-	D)	

152.	His parents de	approve of		
	(A)		(B)	
	his business.	No erro	or.	
	(C).	(D)	in the first	

153. The college library is
(A)
not only equipped with
(B)

very good books but also with the latest

journals. No error. (D)

154. The lovers walked besides each other

(A) (B)

in silence. No error.
(C) (D)

155. Men are wanted for the army,
(A) (B)

and the navy, and the air force. (C) (D)

Directions: In question nos. 156 to 160, sentences are given with blanks to be filled in with an appropriate word(s). Four alternatives are suggested for each question. Choose the correct alternative out of the four and indicate it by blackening the appropriate oval [] in the Answer Sheet.

Answer Sheet.	ropriate oval [•] in the
156. China is a big than any other	country, in area it is bigger country Russia.
(A) accept	(B) • except
(C) expect	(D) access
157. The masks wor	n by the men helped them identity.
(A) conceal	(B) congeal
(C), masquerade	(B) congeal (D) cheat
	occasion of Laxmi Puja
(A) officious	(B) auspicious
(C) fortuitous	· (D), prosperous
	to be taken with any one
(A) contagious	(B) infectious
(C) · diseased	(D) defiled
160. The treasure washore.	
(A) on	(B) underneath
(C) toward	(D) off
Directions . In avanta	

Directions: In question nos. 161 to 165, out of the four alternatives, choose the one which best expresses the meaning of the given word and mark it in the Answer Sheet.

161.	Scorn	
	(A) concise (C) bias	(B) despise (D) fierce
162.	Catastrophe	
- 19	(A) tragedy	(B) anger
	(C) violence	(D) hatred
163.	Abjure	

(A) renounce (B) announce (C) pronounce (D) denounce

164. Assess

(A) overload

(B) measure

(C) permit

(D) enter

165. Elastic

(A) free

(B) liberal

(C) flexible

(D) broad

Directions: In question nos. 166 to 170, choose the word opposite in meaning to the given word and mark it in the Answer Sheet.

166. Safe

(A) rash

(B) insecure

(C) beneficial

167. Redundant

(D) harsh

(A) repentant (C) singular

(B) surplus (D) required

168. Fair

(A) untrue

(B) unjust

(C) ∠coarse

(D) harsh

169. Boisterous

(A) serenity

(B) calm

(C) cheerful

(D) courageous

170. Substantial

(A) flimsy

(B) hefty

(C) actual

(D) excess

Directions: In question nos. 171 to 175, four alternatives are given for the Idiom/Phrase underlined in the sentence. Choose the alternative which best expresses the meaning of the Idiom/ Phrase and mark it in the Answer Sheet.

171. We must work with all our might and main, otherwise we cannot succeed.

(A) full force

(B) complete trust

(C) exceptional skill (D) full unity

172. The sailors nailed their colours to their mast.

(A) put up a colourful mast

(B) refused to climb down

(C) took over the ship

(D) decided to abandon the ship

173. We had (had) better batten down the hatches. The weather is unpredictable.

(A) stay in-door

(B) prepare for a difficult situation

(C) go somewhere safe

(D) face the obstacles

174. It is difficult to have a sensible discussion with her as she flies off at a tangent.

(A) gets carried away

(B) starts discussing something irrelevant

(C) loses her temper easily

(D) does not really understand anything

175. The students found it hard to go at equal speed with the professor.

(A) get away from (B) put up with

(C) keep up with (D) race against

Directions: In question nos. 176 to 180, a sentence/a part of the sentence is underlined. Below are given alternatives to the underlined part at (A), (B), (C) which may improve the sentence. Choose the correct alternative. In case no improvement is needed your answer is (D). Mark your answer in the Answer Sheet.

176. He will revise it when he is comes back.

(A) when he come back

(B) on coming back

(C) when he came back

(D) No improvement

177. The members of the student's union did not give the examination in protest.

(A) did not write

(B) did not sit for

(C) did not show up for

(D) No improvement

178. She was kept from her assignment because of her loquacious room-mate.

(A) noisy

(B) irritating

(C) talkative

(D) No improvement

179. James epitomizes everything that a leader should be

(A) worships

(B) loves

(C) adores

(D) No improvement

180. The businessman is respectively connected. (B) respectably

(A) respectfully

(C) receptively

(D) No improvement

Directions: In question nos. 181 to 185, out of the four alternatives, choose the one which can be substituted for the given words/sentences and indicate it by blackening the appropriate oval [in the Answer Sheet.

181. One who offers his service of his own free will

(A) Worker

(B) Slave

(C) Volunteer

(D) Servant

182. One who is always doubting

(A) Sceptic

(B) Deist

(C) Rationalist

(D) Positivist

183. A collection of slaves

(A) Coffle

(B) Crew

(C) Company

(D) Cortege

184. A professional soldier hired to serve in a foreign army

(A) Mercenary

(B) Liquidator

(C) Venal

(D) Hireling

185. Not likely to be easily pleased

(A) Fastidious

(B) Infallible

(C) Fatalist

(D) Communist

Directions: In question nos. 186 to 190, four words are given in each question, out of which only one word is correctly spelt. Find the correctly spelt word and mark your answer in the Answer Sheet.

186. (A) Resillient

(B) Presuade

(C) Dubious

(D) Depplete

187. (A) Ineffectual

(B) Iniffectual

(C) Inefectual

(D) Inefictual

188. (A) Massacer

(B) Massecre

(C) Masacre

(D) Massacre

189. (A) Conciance (C) Conscience

(B) Consience (D) Connscience

190. (A) Nirvana

(B) Nirvena

(C) Nirvanna

(D) Nyrvana

Directions: In question nos. 191 to 200, you have two brief passages with 5 questions following each passage. Read the passages carefully and choose the best answer to each question out of the four alternatives and mark it by blackening the appropriate oval [in the Answer Sheet.

PASSAGE I (Question Nos. 191 to 195)

Street theatre in India is a well established ancient art form. Despite the proliferation of modern means of entertainment and communication, street theatre continues to flourish in India.

Street theatre as a channel of communication has for centuries been propagating reforms by highlighting social, economic and political issues present in the society. Unlike in the olden days, its performance is no longer restricted to villages or small localities of the city. Today small groups of performers including students, would stage performances to mobilize public opinion or to help create or raise awareness over a particular issue of public importance. Themes on substance abuse, AIDS awareness, and domestic violence are some of the areas highlighted by contemporary street theatre troupe. Unlike in regular drama street drama employ very little props and images. The human body becomes the main tool in which choreography, mime, dialogues, songs and slogans are extensively used.

Street theatre is one of the most intimate media. Its appeal is to the emotions leading to quiek psychological impact on audiences. By being local and live they also are able to establish not only direct contact with the audience but by being cost-effective and flexible they are popular among all age groups.

191. Mod com	lern means of munication does affect	ent	ertainment and
((A)	does affect	-	street theatre.
100	helps popularise	(D)	helps establish
192. In the	he olden days st	reet t	heatre
	oco of Small	localit	ies of the city.
(4)	was restricted		
(B)	was not restrict	ed	
(C)	was opened	cu	
(D)	was entertained		
193, Stre of p	et theatre usually ublic importance	<u> </u>	with issues
	is distanced		is performed
	deals		
194. Stre	et theatre is _		_ to stage.
(A)	nothing	(B)	costly
	reasonable		
195. Stre	et theatre cre	ates	an/a
imp	act on audiences	S.	
· (A)	intimate	(B)	emotional
(C)	mystical	(D)	physical
	PASSA	GE II	
	(Question Nos.		

Self-directed learning, in its broadest meaning, describes a process in which individuals take the initiative with or without the help of others, in diagnosing their learning needs formulating learning goals, identifying resources for learning, choosing and implementing learning strategies and evaluating learning outcomes. Thus it is important to attain new knowledge easily and skillfully for the rest of his or her life.

What is the need for self-directed learning?

One reason is that there is convincing evidence that people, who take the initiative in learning, learn more things and learn better than people who sit at the feet of teachers passively waiting

to be taught. The second reason is that selfto be taught. The second reason is that selfdirected learning is more in tune with our natural
directed learning is psychological development; an
processes of psychological development; an
processes of maturing is developing the
essential aspect of maturing is developing the
essential aspect of maturing is developing the
ability to take increasing responsibility of our own
ability to take increasingly self-directed. The
lives to become increasingly self-directed. The
third reason is that many of the new developthird reason is that many of the new developments in education put a heavy responsibility on
the learners to take a good deal of initiative in
their own learning. To meet the challenges in
their own learning. To meet the challenges in
today's instructive environment, self-directed
learning is most essential.

- 196. In self-directed learning, an individual
 - (A) Takes initiative with or without the help of others
 - (B) Is passive and waits for directions
 - (C) Is helpless and dependent
 - (D) Takes initiative, without an objective
- 197. There is need for self-directed learning because
 - (A) it is less challenging
 - (B) it helps people to learn more things and learn better
 - (C) it is a more cost-effective method
 - (D) it is a modern method of learning
- 198. Which word best describes self-directed learning?
 - (A) Active learning
 - (B), Passive learning
 - (C) Compulsory learning
 - (D) Repulsive learning
 - 199. The modern environment according to the author is
 - (A) Restrictive
- (B) Instructive
- (C) Less developed (D) Impracticable
- 200. The synonym of the word "diagnosing" is
 - (A) Searching
- (B) Examining
- (C) Identifying
- (P) Complying