SSC Combined Graduate Level Exam Paper held on 26.06.2011 (First Sitting)

DO NOT OPEN THE SEAL OF THE BOOKLET UNTIL YOU ARE TOLD TO DO SO

| Test Form No. टेस्ट फॉर्म सं. 055 QI 6 | **BD 2011** | **DL** | 2332611 |

Time Allowed : **2** Hours (For V.H. (low vision) Candidates : 2 hr. 40 min.)
निर्धारित समय : **2** घंटे (दृष्टिबाधित (कम दृष्टि) उम्मीदवारों के लिए : 2 घण्टे 40 मिनट)

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 **four** parts :
   Part – A : General Intelligence & Reasoning (50 Questions)
   Part – B : General Awareness (50 Questions)
   Part – C : Numerical Aptitude (50 Questions)
   Part – D : English Comprehension (50 Questions)
2. All questions are compulsory and carry equal marks.
3. Before you start to answer the questions you must check up this Booklet and ensure that it contains all the pages (1-40) and see that no page is missing or repeated. If you find any defect in this Booklet, you must get it replaced *immediately*.
4. *The paper carries negative marking. 0·25 marks will be deducted for each wrong answer.*
5. You will be supplied the Answer-Sheet separately by the Invigilator. You must complete the details of *Ticket Number, Roll Number and Test Form Number* on Side-I of the Answer-Sheet carefully before you actually start answering the questions. You must also put your signature on the Answer-Sheet at the prescribed place. These instructions must be fully complied with, failing which, your Answer-Sheet will not be evaluated and you will be awarded 'ZERO' mark. (For V.H. candidates these details will be filled in by the scribe. However all V.H. candidates must put their left-hand thumb impression at the space provided in the Answer-Sheet. In addition, those V.H. candidates who can sign should also put their signatures in addition to thumb impression.)
6. Answers must be shown by completely blackening the corresponding rectangles on Side-II of the Answer-Sheet against the relevant question number by HB pencil only. Answers which are *not* shown by HB pencil will *not* be awarded any mark.
7. A machine will read the coded information in the OMR Answer-Sheet. In case the information is incomplete/different from the information given in the application form, the candidature of such candidate will be treated as cancelled.
8. The Answer-Sheet must be handed over to the Invigilator before you leave the Examination Hall.
9. Failure to comply with any of the above instructions will render a candidate liable to such action/penalty as may be deemed fit.
10. The manner in which the different questions are to be answered has been explained at the back of this Booklet (Page No. 40), which you should read carefully before actually answering the questions.
11. 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.
12. In lieu of Questions No. 46 to 50 and 147 to 150 relating to figural and graph portions, alternate questions have been provided to be attempted by V.H. candidates only.
13. No rough work is to be done on the Answer-Sheet. Space for rough work has been provided below the questions in Part A and Part C of this Booklet.

उम्मीदवारों के लिए अनुदेश

1. इस पुस्तिका में कुल **200** प्रश्न हैं, जिनमें निम्नलिखित चार भाग शामिल हैं :
   भाग – क : सामान्य बुद्धि और तर्क (50 प्रश्न)
   भाग – ख : सामान्य जानकारी (50 प्रश्न)
   भाग – ग : सांख्यिकीय अभिक्षमता (50 प्रश्न)
   भाग – घ : अंग्रेजी परिज्ञान (50 प्रश्न)
2. सभी प्रश्न अनिवार्य हैं तथा सबके बराबर अंक हैं ।
3. प्रश्नों के उत्तर देने से पहले आप इस पुस्तिका की जाँच करके देख लें कि इसमें पूरे पृष्ठ (1-40) हैं तथा कोई पृष्ठ कम या दुबारा तो नहीं आ गया है । यदि आप इस पुस्तिका में कोई त्रुटि पाएँ, तो *तत्काल* इसके बदले दूसरी पुस्तिका ले लें ।
4. *प्रश्न पत्र में नकारात्मक अंकन होगा । हर ग़लत उत्तर के लिए 0·25 अंक काटा जाएगा ।*
5. निरीक्षक द्वारा आपको उत्तर-पत्रिका अलग से दी जाएगी । प्रश्नों के उत्तर वास्तव में शुरू करने से पहले आप उत्तर-पत्रिका के Side-I में अपना *टिकट नम्बर, रोल नम्बर तथा टेस्ट फॉर्म संख्या* अवश्य लिखें । उत्तर-पत्रिका पर निर्धारित स्थान में आप अपने हस्ताक्षर भी अवश्य करें । उपर्युक्त अनुदेशों का पूरी तरह अनुपालन किया जाए, अन्यथा आपकी उत्तर-पत्रिका को जाँचा नहीं जाएगा और 'शून्य' अंक दिया जाएगा । (दृष्टिबाधित उम्मीदवारों के लिए यह विवरण लिपिक द्वारा भरा जाए । परन्तु सभी दृष्टिबाधित उम्मीदवार उत्तर-पत्रिका में निर्धारित स्थान पर अपने बाएँ हाथ के अंगूठे का निशान अवश्य लगाएँ । इसके अतिरिक्त, जो दृष्टिबाधित उम्मीदवार हस्ताक्षर कर सकते हैं, वे अंगूठे के निशान के अलावा अपने हस्ताक्षर भी कर दें ।)
6. उत्तर-पत्रिका में सभी उत्तर Side-II में प्रश्न संख्या के सामने दिये गये सम्बन्धित आयताकार खानों को HB पेंसिल से पूरी तरह काला करके दिखाएँ । जो आयताकार खाने HB पेंसिल से *नहीं* भरे जाएँगे, उनके लिए कोई अंक *नहीं* दिया जाएगा ।
7. ओ.एम.आर. उत्तर-पत्रिका में भरी गई कूट सूचना को एक मशीन पढ़ेगी । यदि सूचना अपूर्ण है अथवा आवेदन प्रपत्र में दी गई सूचना से भिन्न है, तो ऐसे अभ्यर्थी की अभ्यर्थिता निरस्त समझी जाएगी ।
8. परीक्षा-भवन छोड़ने से पहले परीक्षार्थी को उत्तर-पत्रिका निरीक्षक के हवाले कर देनी चाहिए ।
9. ऊपर के अनुदेशों में से किसी एक का भी पालन न करने पर उम्मीदवार पर विवेकानुसार कार्यवाही की जा सकती है या दण्ड दिया जा सकता है ।
10. विभिन्न प्रश्नों के उत्तर देने की विधि इस पुस्तिका के पीछे (पृष्ठ संख्या 40) में छपे हुए निर्देशों में दे दी गई है, इसे आप प्रश्नों के उत्तर देने से पहले ध्यानपूर्वक पढ़ लें ।
11. प्रश्नों के उत्तर जितनी जल्दी हो सके तथा ध्यानपूर्वक दें । कुछ प्रश्न आसान तथा कुछ कठिन हैं । किसी एक प्रश्न पर बहुत अधिक समय न लगाएँ ।
12. आकृति और आलेख से सम्बन्धित प्रश्न संख्या 46 से 50 एवं 147 से 150 के बदले में केवल दृष्टिबाधित उम्मीदवारों द्वारा हल किए जाने के लिए वैकल्पिक प्रश्न दिए गए हैं ।
13. कोई रफ़ कार्य उत्तर-पत्रिका पर नहीं करना है । रफ़ कार्य के लिए स्थान इसी पुस्तिका के भाग क तथा भाग ग के प्रश्नों के नीचे दिया गया है ।

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

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PART A
GENERAL INTELLIGENCE & REASONING

Directions : *In questions no. 1 to 9, select the related letters/words/numbers from the given alternatives.*

1. 6 : 64 : : 11 : ?
   - (A) 144
   - (B) 169
   - (C) 121
   - (D) 124

2. 123 : 4 : : 726 : ?
   - (A) 23
   - (B) 26
   - (C) 14
   - (D) 12

3. Fish : Scales : : Bear : ?
   - (A) Feathers
   - (B) Leaves
   - (C) Fur
   - (D) Skin

4. Writer : Pen : : ?
   - (A) Needle : Tailor
   - (B) Artist : Brush
   - (C) Painter : Canvas
   - (D) Teacher : Class

5. NUMERAL : UEALRMN : : ALGEBRA : ?
   - (A) LRBAGEA
   - (B) BARLAGE
   - (C) LERAGBA
   - (D) LERABGA

6. BDAC : FHEG : : NPMO : ?
   - (A) RQTS
   - (B) QTRC
   - (C) TRQS
   - (D) RTQS

7. FGHI : OPQR : : BCDE : ?
   - (A) KLMJ
   - (B) KLMN
   - (C) IUVW
   - (D) STUW

8. PNLJ : IGEC : : VTRP : ?
   - (A) OMKI
   - (B) RSTU
   - (C) QSRC
   - (D) RPOM

9. 17 : 60 : : 20 : ?
   - (A) 57
   - (B) 69
   - (C) 81
   - (D) 93

Directions : *In questions no. 10 to 15, find the odd number/letters/word from the given alternatives.*

10. (A) 162
    (B) 405
    (C) 567
    (D) 644

11. (A) 156
    (B) 201
    (C) 273
    (D) 345

12. (A) Flute
    (B) Violin
    (C) Guitar
    (D) Sitar

13. (A) Prod
    (B) Sap
    (C) Jab
    (D) Thrust

14. (A) JKOP
    (B) MNST
    (C) CABD
    (D) OPWX

15. (A) CAFD
    (B) TSWV
    (C) IGLJ
    (D) OMRP

SPACE FOR ROUGH WORK

16. In the following question, number of letters are skipped in between by a particular rule. Which of the following series observes the rule ?

(A) ABFGJK   (B) ACFJOU

(C) MPQSTV   (D) ADFHJL

17. Find out the pair of numbers that does not belong to the group for lack of common property.

(A) 11 – 115   (B) 10 – 90

(C) 9 – 72   (D) 8 – 56

Directions : Which one of the given responses would be a meaningful descending order of the following ?

18.
1.	Major	2.	Captain
3.	Colonel	4.	Brigadier
5.	Lt. General		

(A) 5, 4, 3, 1, 2   (B) 5, 1, 4, 2, 3

(C) 4, 5, 1, 3, 2   (D) 3, 4, 2, 5, 1

Directions : Arrange the following words as per order in the dictionary.

19.
1.	Dissident	2.	Dissolve
3.	Dissent	4.	Dissolute
5.	Dissolution		

(A) 3, 1, 4, 5, 2   (B) 3, 2, 1, 4, 5

(C) 3, 1, 4, 2, 5   (D) 3, 2, 4, 5, 1

20. Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it ?

kcb_cab_bacab_cba_ab

(A) cabcb   (B) abccb

(C) bacbc   (D) bcaba

Directions : In questions no. 21 to 24 a series is given, with one/two term(s) missing. Choose the correct alternative from the given ones that will complete the series.

21. 4, 196, 16, 169, ?, 144, 64

(A) 21   (B) 81

(C) 36   (D) 32

22. 8, 15, 36, 99, 288, ?

(A) 368   (B) 676

(C) 855   (D) 908

23. XYZCBAUVWFE ? ?

(A) DR   (B) RS

(C) DS   (D) MN

24. reoc, pgme, nikg, lkii, ?

(A) acef   (B) jmgk

(C) efgh   (D) wxyz

25. Among her children, Ganga's favourites are Ram and Rekha. Rekha is the mother of Sharat, who is loved most by his uncle Mithun. The head of the family is Ram Lal, who is succeeded by his sons Gopal and Mohan. Gopal and Ganga have been married for 35 years and have 3 children. What is the relation between Mithun and Mohan ?

(A) Uncle
(B) Son
(C) Brother
(D) No relation

26. Find the wrong number in the series.

6, 9, 15, 22, 51, 99

(A) 99
(B) 51
(C) 22
(D) 15

27. In a row of girls, Kamla is 9th from the left and Veena is 16th from the right. If they interchange their positions, Kamla becomes 25th from the left. How many girls are there in the row ?

(A) 34
(B) 36
(C) 40
(D) 41

28. Ravi has spent a quarter $\left(\dfrac{1}{4}\right)$ of his life as a boy, one-fifth $\left(\dfrac{1}{5}\right)$ as a youth, one-third $\left(\dfrac{1}{3}\right)$ as a man and thirteen (13) years in old age.

What is his present age ?

(A) 70 years
(B) 80 years
(C) 60 years
(D) 65 years

29. Five boys A, B, C, D, E are sitting in a park in a circle. A is facing South-West, D is facing South-East, B and E are right opposite A and D respectively and C is equidistant between D and B. Which direction is C facing ?

(A) West
(B) South
(C) North
(D) East

30. At what time are the hands of clocks together between 6 and 7 ?

(A) $32\dfrac{8}{11}$ minutes past 6

(B) $34\dfrac{8}{11}$ minutes past 6

(C) $30\dfrac{8}{11}$ minutes past 6

(D) $32\dfrac{5}{7}$ minutes past 6

31. Out of 100 families in the neighbourhood, 50 have radios, 75 have TVs and 25 have VCRs. Only 10 families have all three and each VCR owner also has a TV. If some families have radio only, how many have only TV ?

(A) 30
(B) 35
(C) 40
(D) 45

32. Suresh was born on 4th October 1999. Shashikanth was born 6 days before Suresh. The Independence day of that year fell on Sunday. Which day was Shashikanth born ?

(A) Tuesday
(B) Wednesday
(C) Monday
(D) Sunday

SPACE FOR ROUGH WORK

33. From the given alternative words, select the word which **cannot** be formed using the letters of the given word :

'CONCENTRATION'

(A) CONCERN   (B) NATION
(C) TRAIN   (D) CENTRE

34. In a certain office, 1/3 of the workers are women, 1/2 of the women are married and 1/3 of the married women have children. If 3/4 of the men are married and 2/3 of the married men have children, then what part of workers are without children ?

(A) 5/18   (B) 4/9
(C) 11/18   (D) 17/36

35. If a man on a moped starts from a point and rides 4 km South, then turns left and rides 2 km to turn again to the right to ride 4 km more, towards which direction is he moving ?

(A) North   (B) West
(C) East   (D) South

36. Ganesh cycles towards South-West a distance of 8 m, then he moves towards East a distance of 20 m. From there he moves towards North-East a distance of 8 m, then he moves towards West a distance of 6 m. From there he moves towards North-East a distance of 2 m. Then he moves towards West a distance of 4 m and then towards South-West 2 m and stops at that point. How far is he from the starting point ?

(A) 12 m   (B) 10 m
(C) 8 m   (D) 6 m

37. Two statements are given followed by four inferences. Select the alternative which is most appropriate.

Statements :

India is becoming industrialised.

Pollution is a problem associated with industrialisation.

Inferences :

I. All industrial centres are polluted.
II. India is polluted.
III. Polluted nations are industrialised.
IV. India may become polluted.

(A) All are appropriate
(B) None is appropriate
(C) Only IV is appropriate
(D) Only II is appropriate

38. From the given alternative words, select the word which can be formed using the letters of the given word :

'DETERMINATION'

(A) DECLARATION
(B) NATIONAL
(C) TERMINATED
(D) DEVIATION

39. If in a certain code HYDROGEN is written as JCJZYSSD, then how can ANTIMONY be written in that code ?

(A) CPVKOQPA   (B) CRZQWABO
(C) ERXMQSRC   (D) GTZOSUTE

40. If DELHI is coded as 73541 and CALCUTTA as 82589662, then how can CALICUT be coded ?
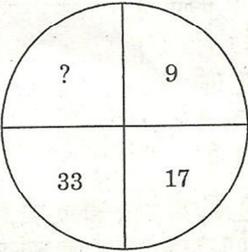
(A) 5279431   (B) 5978013
(C) 8251896   (D) 8543691

SPACE FOR ROUGH WORK

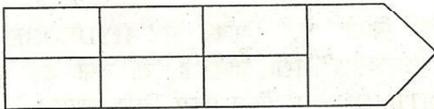**Directions :** *In questions no. 41 and 42, select the missing number from the given responses.*

41.

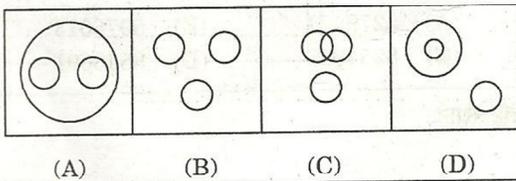| 2	7	9
7	3	4
9	8	?
126	168	216

(A) 8   (B) 3
(C) 6   (D) 36

42.

(A) 60   (B) 68
(C) 55   (D) 65

43. How many rectangles are there in the given diagram ?

(A) 4   (B) 7
(C) 9   (D) 18

44. Which of the following diagrams represents the relationship among Sun, Moon and Star ?

(A)   (B)   (C)   (D)

45. Some equations have been solved on the basis of a certain system. Find the correct answer for the unsolved equation on that basis.
If 9 * 7 = 32, 13 * 7 = 120, 17 * 9 = 208, then 19 * 11 = ?

(A) 150   (B) 180
(C) 210   (D) 240

46. Forecast the Growth Rate for the year 1995 from the following data :

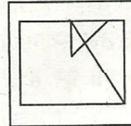| Year →	1990	1991	1992	1993	1994	1995
Growth Rate →	3·5	3·7	4·1	4·9	6·5	?

(A) 7·8   (B) 8·6
(C) 9·7   (D) 9·9

47. If '−' stands for '÷', '+' stands for '×', '÷' for '−' and '×' for '+', which one of the following equations is correct ?
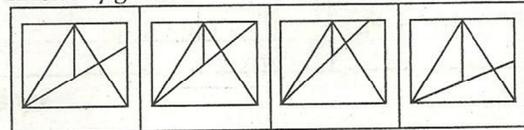
(A) $30 - 6 + 5 \times 4 \div 2 = 27$
(B) $30 + 6 - 5 \div 4 \times 2 = 30$
(C) $30 \times 6 \div 5 - 4 + 2 = 32$
(D) $30 \div 6 \times 5 + 4 - 2 = 40$

Directions : *From the given answer figures, select the one in which the question figure is hidden/embedded.*

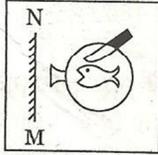48. Question figure :

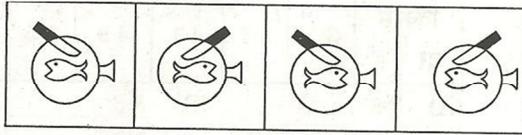Answer figures :

(A)   (B)   (C)   (D)

SPACE FOR ROUGH WORK

Directions : *If a mirror is placed on the line MN, then which of the answer figures is the correct image of the given question figure ?*
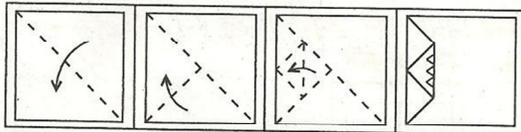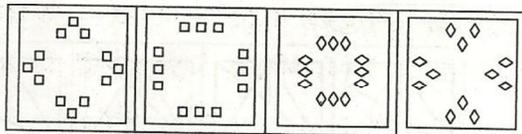
49. Question figure :

Answer figures :

(A)   (B)   (C)   (D)

Directions : *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.*

50. Question figures :

Answer figures :

(A)   (B)   (C)   (D)

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46. Select the letters that complete the first word and begin the second from the given alternatives.

FLO(?)TACK

(A) CK   (B) OR

(C) AT   (D) UR

47. At an election 1/2 of voters vote for Anand, half of the remaining vote for Bhuvan and half of the remaining vote for Chaman. 840 persons did not vote. What percent of the entire list did not vote ?

(A) 8·4   (B) 8·5

(C) 12·4   (D) 12·5

48. Amit is shorter than Biju but taller than Chand. Dhruv is shorter than Amit but taller than Chand and Ekta is shorter than Biju but taller than Amit. Who is the tallest person ?

(A) Biju   (B) Ekta

(C) Amit   (D) Dhruv

49. Four books are kept on each other. K is on A, C is below B. If A is above B, then which book is at the top ?

(A) K   (B) C

(C) A   (D) B

50. In a brick furnace there were 100 bricks, out of which $\frac{1}{4}$ of them were broken into two and $\frac{1}{5}$ of them broken into three pieces in the process of heating. How many full bricks were remaining ?

(A) 40   (B) 45

(C) 55   (D) 56

SPACE FOR ROUGH WORK

PART B

GENERAL AWARENESS

51. Judicial review in the Indian Constitution is based on

    (A) Rule of Law
    (B) Due process of Law
    (C) Procedure established by Law
    (D) Precedents and Conventions

52. The Drafting of the Constitution was completed on

    (A) 26th January 1950
    (B) 26th December 1949
    (C) 26th November 1949
    (D) 30th November 1949

53. Who was the President of the Constituent Assembly ?

    (A) Pt. Jawahar Lal Nehru
    (B) Sardar Patel
    (C) Dr. Rajendra Prasad
    (D) Dr. B.R. Ambedkar

54. Which innovative discussion process is introduced by the Indian Parliament to the World Parliamentary systems ?

    (A) Question hour
    (B) Zero hour
    (C) Resolutions
    (D) Presidential speech

55. The Judges of the Supreme Court retire at the age of

    (A) 60 years   (B) 65 years
    (C) 62 years   (D) 58 years

56. When there is an official change in the exchange rate of domestic currency, then it is called

    (A) Appreciation
    (B) Depreciation
    (C) Revaluation
    (D) Deflation

57. Inflation redistributes income and wealth in favour of

    (A) Pensioners
    (B) Poor
    (C) Middle class
    (D) Rich

58. The fringe benefit tax was introduced in the budget of

    (A) 2003 – 04   (B) 2004 – 05
    (C) 2005 – 06   (D) 2006 – 07

59. In the Budget estimates for 2011 – 12, an allocation of ₹ 400 crore has been made to bring in a green revolution in the East in the cropping system of

    (A) Wheat   (B) Rice
    (C) Jowar   (D) Pulses

60. As announced by the Finance Minister in his budget speech on 28-2-2011, the income tax exemption limit for individuals other than senior citizens and women has been raised to

    (A) ₹ 1,80,000   (B) ₹ 1,90,000
    (C) ₹ 2,00,000   (D) ₹ 2,50,000

Who among the following British persons admitted the Revolt of 1857 as a national revolt ?

(A) Lord Dalhousie

(B) Lord Canning

(C) Lord Ellenborough

(D) Disraeli

The Greek ambassador sent to Chandragupta Maurya's court was

(A) Kautilya

(B) Seleucus Nicator

(C) Megasthenes

(D) Justin

Identify the European power from whom Shivaji obtained cannons and ammunition.

(A) The French

(B) The Portuguese

(C) The Dutch

(D) The English

The call of "Back to the Vedas" was given by

(A) Swami Vivekananda

(B) Swami Dayanand Saraswati

(C) Aurobindo Ghosh

(D) Raja Ram Mohan Roy

Simon Commission was boycotted by the nationalist leaders of India because

(A) they felt that it was only an eyewash

(B) all the members of the Commission were English

(C) the members of the Commission were biased against India

(D) it did not meet the demands of the Indians

66. The lowest layer of the atmosphere is

(A) Stratosphere

(B) Thermosphere

(C) Troposphere

(D) Mesosphere

67. The Konkan Railway connects

(A) Goa – Mangalore

(B) Roha – Mangalore

(C) Kanyakumari – Mangalore

(D) Kanyakumari – Mumbai

68. Bark of this tree is used as a condiment –

(A) Cinnamon   (B) Clove

(C) Neem   (D) Palm

69. How much of the Earth's land surface is desert ?

(A) 1/10th (B) 1/5th

(C) 1/3rd (D) 1/6th

70. Which of the following is called the 'shrimp capital of India' ?

(A) Mangalore   (B) Nagapatnam

(C) Kochi   (D) Nellore

71. River Indus originates from

(A) Hindukush range

(B) Himalayan range

(C) Karakoram range

(D) Kailash range

72. The atmospheric air is held to the Earth by

(A) gravity

(B) winds

(C) clouds

(D) rotation of the Earth

73. The function of ball bearings in a wheel is

(A) to increase friction

(B) to convert kinetic friction into rolling friction

(C) to convert static friction into kinetic friction

(D) just for convenience

74. 'Shock-absorbers' are usually made of steel as it

(A) is not brittle

(B) has lower elasticity

(C) has higher elasticity

(D) has no ductile property

75. The first computer made available for commercial use was

(A) MANIAC

(B) ENIAC

(C) UNIVAC

(D) EDSAC

76. A communication network which is used by large organizations over regional, national or global area is called

(A) LAN   (B) WAN

(C) MAN   (D) VAN

77. Who was the architect of North and South Blocks of the Central Secretariat in Delhi ?

(A) Sir Edward Lutyens

(B) Herbert Baker

(C) Robert Tor Russell

(D) Antonin Raymond

78. Saliva helps in the digestion of

(A) Fats   (B) Starch

(C) Proteins   (D) Vitamins

79. The longest bone in the human body is

(A) Ulna   (B) Humerus

(C) Femur   (D) Tibia

80. Red data book gives information about species which are

(A) extinct   (B) endangered

(C) dangerous   (D) rare

81. Which of the following is the smallest bird ?

(A) Pigeon

(B) Parrot

(C) Humming bird

(D) House sparrow

82. The time period of a pendulum when taken to the Moon would

(A) remain the same

(B) decrease

(C) become zero

(D) increase

Indian Army's Operation 'Saiyam' was related to

(A) Kashmir

(B) Indo-China Border in the Central Region

(C) North-East

(D) Indo-Pak Border in Punjab and Rajasthan

Which of the following could be used as fuel in propellant or rockets ?

(A) Liquid Hydrogen + Liquid Nitrogen

(B) Liquid Oxygen + Liquid Argon

(C) Liquid Nitrogen + Liquid Oxygen

(D) Liquid Hydrogen + Liquid Oxygen

The addition of gypsum to portland cement helps in

(A) increasing the strength of cement

(B) rapid setting of cement

(C) preventing rapid setting of cement

(D) reduction in the cost of cement

White lung disease is prevalent among the workers of

(A) Paper industry

(B) Cement industry

(C) Cotton industry

(D) Pesticide industry

Iodoform is used as an

(A) antipyretic

(B) analgesic

(C) antiseptic

(D) anaesthetic

88. An artificial ecosystem is represented by

(A) pisciculture tank

(B) agricultural land

(C) zoo

(D) aquarium

89. The constituents of automobile exhaust that can cause cancer is/are

(A) Oxides of nitrogen

(B) Carbon monoxide

(C) Polycyclic hydrocarbons

(D) Lead

90. The optimum dissolved oxygen level (in mg/litre) required for survival of aquatic organisms is

(A) 4 – 6   (B) 2 – 4

(C) 8 – 10   (D) 12 – 16

91. The world's only floating national park is situated in

(A) Manipur

(B) Kuala Lumpur

(C) Bilaspur

(D) Dispur

92. According to the latest 'Education Development Index' based on a series of surveys conducted by the National University of Education, Planning and Administration and released in February, 2011, the state with the highest Development Index is

(A) Tamil Nadu   (B) Kerala

(C) Punjab   (D) Gujarat

The 'Project Snow Leopard' to conserve the endangered species, launched by the Union Ministry of Environment and Forests covers the states of

(A) Jammu & Kashmir and Himachal Pradesh only

(B) Jammu & Kashmir, Himachal Pradesh and Uttarakhand only

(C) Jammu & Kashmir, Himachal Pradesh, Uttarakhand and Arunachal Pradesh only

(D) Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Arunachal Pradesh and Sikkim

In the Railway Budget for 2011 – 12, an outlay of ₹ 57,630 crore has been announced for adding new lines with length of

(A) 1000 km

(B) 1200 km

(C) 1300 km

(D) 1500 km

The strong earthquake-cum-tsunami which has moved Japan's main island by a few feet and has caused the Earth's axis to wobble is expected to lead to the shortening of the day by

(A) 1·6 microseconds

(B) 2·3 microseconds

(C) 3·1 microseconds

(D) 3·4 microseconds

96. Which of the following folk/tribal dances is associated with Uttar Pradesh ?

(A) Veedhi   (B) Thora

(C) Tamasha   (D) Rauf

97. Which of the following books has been written by Atiq Rahimi ?

(A) *Earth and Ashes*

(B) *This Savage Rite*

(C) *The Red Devil*

(D) *Witness the Night*

98. Who is the recepient of the Sahitya Akademi Award 2010 in Hindi Literature category ?

(A) Uday Prakash

(B) Laxman Dubey

(C) Nanjil Nandan

(D) Mangat Badal

99. The 2010 FIFA World Cup Final was held at

(A) Paris

(B) Berlin

(C) Johannesburg

(D) London

100. Who of the following received Sangeet Natak Akademi's Ustad Bismillah Khan Yuva Puruskar for 2009 in 'Hindustani Vocal Music' ?

(A) Omkar Shrikant Dadarkar

(B) Ragini Chander Shekar

(C) Abanti Chakravorty and Sukracharya Rabha

(D) K. Nellai Manikandan

PART C
NUMERICAL APTITUDE

101. The value of

$$\frac{3\sqrt{2}}{\sqrt{3}+\sqrt{6}} - \frac{4\sqrt{3}}{\sqrt{6}+\sqrt{2}} + \frac{\sqrt{6}}{\sqrt{3}+\sqrt{2}} \text{ is}$$

(A) 4   (B) 0

(C) $\sqrt{2}$ (D) $3\sqrt{6}$

102. $\sqrt{6+\sqrt{6+\sqrt{6+\ldots}}} = ?$

(A) 2·3   (B) 3

(C) 6   (D) 6·3

103. The square root of $\left(\dfrac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}\right)$ is

(A) $\sqrt{3}+\sqrt{2}$ (B) $\sqrt{3}-\sqrt{2}$

(C) $\sqrt{2}\pm\sqrt{3}$ (D) $\sqrt{2}-\sqrt{3}$

104. The remainder when 3^{21} is divided by 5 is

(A) 1   (B) 2

(C) 3   (D) 4

105. The value of $\dfrac{2\frac{1}{3} - 1\frac{2}{11}}{3 + \cfrac{1}{3 + \cfrac{1}{3 + \frac{1}{3}}}}$ is

(A) $\dfrac{38}{109}$ (B) $\dfrac{109}{38}$

(C) 1   (D) $\dfrac{116}{109}$

106. The last digit of $(1001)^{2008} + 1002$ is

(A) 0   (B) 3

(C) 4   (D) 6

107. $\sqrt[3]{1-\dfrac{127}{343}}$ is equal to

(A) $\dfrac{5}{9}$ (B) $1-\dfrac{1}{7}$

(C) $\dfrac{4}{7}$ (D) $1-\dfrac{2}{7}$

108. If the sum of two numbers be multiplied by each number separately, the products so obtained are 247 and 114. The sum of the numbers is

(A) 19   (B) 20

(C) 21   (D) 23

109. Find a number, one-seventh of which exceeds its eleventh part by 100.

(A) 1925   (B) 1825

(C) 1540   (D) 1340

110. If $x * y = (x + 3)^2 (y - 1)$, then the value of $5 * 4$ is

(A) 192   (B) 182

(C) 180   (D) 172

111. $\dfrac{(0\cdot05)^2 + (0\cdot41)^2 + (0\cdot073)^2}{(0\cdot005)^2 + (0\cdot041)^2 + (0\cdot0073)^2}$ is

(A) 10   (B) 100

(C) 1000   (D) None of these

112. If $9\sqrt{x} = \sqrt{12} + \sqrt{147}$, then $x = ?$

(A) 2   (B) 3

(C) 4   (D) 5

SPACE FOR ROUGH WORK

113. A and B can complete a piece of work in 8 days, B and C can do it in 12 days, C and A can do it in 8 days. A, B and C together can complete it in

(A) 4 days   (B) 5 days

(C) 6 days   (D) 7 days

114. X is 3 times as fast as Y and is able to complete the work in 40 days less than Y. Then the time in which they can complete the work together is

(A) 15 days   (B) 10 days

(C) $7\frac{1}{2}$ days   (D) 5 days

115. A copper wire is bent in the shape of a square of area 81 cm^2. If the same wire is bent in the form of a semicircle, the radius (in cm) of the semicircle is (Take $\pi = \frac{22}{7}$)

(A) 16   (B) 14

(C) 10   (D) 7

116. The volume (in m^3) of rain water that can be collected from 1·5 hectares of ground in a rainfall of 5 cm is

(A) 75   (B) 750

(C) 7500   (D) 75000

117. A river 3 m deep and 40 m wide is flowing at the rate of 2 km per hour. How much water (in litres) will fall into the sea in a minute ?

(A) 4,00,000   (B) 40,00,000

(C) 40,000   (D) 4,000

118. The L.C.M. of three different numbers is 120. Which of the following *cannot* be their H.C.F. ?

(A) 8   (B) 12

(C) 24   (D) 35

119. A number when divided by 49 leaves 32 as remainder. This number when divided by 7 will have the remainder as

(A) 4   (B) 3

(C) 2   (D) 5

120. In an examination a student scores 4 marks for every correct answer and loses 1 mark for every wrong answer. If he attempts all 75 questions and secures 125 marks, the number of questions he attempts correctly is

(A) 35   (B) 40

(C) 42   (D) 46

121. The traffic lights at three different road crossings change after 24 seconds, 36 seconds and 54 seconds respectively. If they all change simultaneously at 10 : 15 : 00 AM, then at what time will they again change simultaneously ?

(A) 10 : 16 : 54 AM

(B) 10 : 18 : 36 AM

(C) 10 : 17 : 02 AM

(D) 10 : 22 : 12 AM

122. A can do a work in 12 days. When he had worked for 3 days, B joined him. If they complete the work in 3 more days, in how many days can B alone finish the work ?

(A) 6 days   (B) 12 days

(C) 4 days   (D) 8 days

123. Among three numbers, the first is twice the second and thrice the third. If the average of the three numbers is 49·5, then the difference between the first and the third number is

(A) 54 (B) 28

(C) 39·5 (D) 41·5

124. The mean of 50 numbers is 30. Later it was discovered that two entries were wrongly entered as 82 and 13 instead of 28 and 31. Find the correct mean.

(A) 36·12 (B) 30·66

(C) 29·28 (D) 38·21

125. A bicycle wheel makes 5000 revolutions in moving 11 km. Then the radius of the wheel (in cm) is (Take $\pi = \dfrac{22}{7}$)

(A) 70 (B) 35

(C) 17·5 (D) 140

126. The perimeter of a triangle is 40 cm and its area is 60 cm^2. If the largest side measures 17 cm, then the length (in cm) of the smallest side of the triangle is

(A) 4 (B) 6

(C) 8 (D) 15

127. A shopkeeper allows a discount of 10% to his customers and still gains 20%. Find the marked price of the article which costs ₹ 450.

(A) ₹ 600 (B) ₹ 540

(C) ₹ 660 (D) ₹ 580

128. What single discount is equivalent to two successive discounts of 20% and 15% ?

(A) 35% (B) 32%

(C) 34% (D) 30%

129. In a business partnership among A, B, C and D, the profit is shared as follows :

$$\dfrac{\text{A's share}}{\text{B's share}} = \dfrac{\text{B's share}}{\text{C's share}} = \dfrac{\text{C's share}}{\text{D's share}} = \dfrac{1}{3}.$$

If the total profit is ₹ 4,00,000, the share of C is

(A) ₹ 1,12,500 (B) ₹ 1,37,500

(C) ₹ 90,000 (D) ₹ 2,70,000

130. A can contains a mixture of two liquids A and B in the ratio 7 : 5. When 9 litres of mixture are drawn off and the can is filled with B, the ratio of A and B becomes 7 : 9. Litres of liquid A contained by the can initially was

(A) 10 (B) 20

(C) 21 (D) 25

131. What number should be added to or subtracted from each term of the ratio 17 : 24 so that it becomes equal to 1 : 2 ?

(A) 5 is subtracted

(B) 10 is added

(C) 7 is added

(D) 10 is subtracted

132. The ratio of weekly incomes of A and B is 9 : 7 and the ratio of their expenditures is 4 : 3. If each saves ₹ 200 per week, then the sum of their weekly incomes is

(A) ₹ 3,600 (B) ₹ 4,200

(C) ₹ 4,800 (D) ₹ 5,600

SPACE FOR ROUGH WORK

133. If 30% of A is added to 40% of B, the answer is 80% of B. What percentage of A is B ?

(A) 30%   (B) 40%

(C) 70%   (D) 75%

134. A man can row 6 km/h in still water. If the speed of the current is 2 km/h, it takes 3 hours more in upstream than in the downstream for the same distance. The distance is

(A) 30 km   (B) 24 km

(C) 20 km   (D) 32 km

135. If the selling price of 10 articles is equal to the cost price of 11 articles, then the gain percent is

(A) 10   (B) 11

(C) 15   (D) 25

136. While selling a watch, a shopkeeper gives a discount of 5%. If he gives a discount of 6%, he earns ₹ 15 less as profit. What is the marked price of the watch ?

(A) ₹ 1,250   (B) ₹ 1,400

(C) ₹ 1,500   (D) ₹ 750

137. Krishna purchased a number of articles at ₹ 10 for each and the same number for ₹ 14 each. He mixed them together and sold them for ₹ 13 each. Then his gain or loss percent is

(A) Loss $8\frac{1}{3}$ %   (B) Gain $8\frac{2}{3}$ %

(C) Loss $8\frac{2}{3}$ %   (D) Gain $8\frac{1}{3}$ %

138. A trader bought two horses for ₹ 19,500. He sold one at a loss of 20% and the other at a profit of 15%. If the selling price of each horse is the same, then their cost prices are respectively

(A) ₹ 10,000 and ₹ 9,500

(B) ₹ 11,500 and ₹ 8,000

(C) ₹ 12,000 and ₹ 7,500

(D) ₹ 10,500 and ₹ 9,000

139. The cost price of an article is 40% of the selling price. What percent of the cost price is the selling price ?

(A) 140%   (B) 200%

(C) 220%   (D) 250%

140. If 90% of A = 30% of B and B = 2x% of A, then the value of x is

(A) 450   (B) 400

(C) 300   (D) 150

141. When the price of sugar decreases by 10%, a man could buy 1 kg more for ₹ 270. Then the original price of sugar per kg is

(A) ₹ 25   (B) ₹ 30

(C) ₹ 27   (D) ₹ 32

142. If the price of sugar is raised by 25%, find by how much percent a householder must reduce his consumption of sugar so as not to increase his expenditure ?

(A) 10   (B) 20

(C) 18   (D) 25

143. The difference between the compound interest and simple interest on ₹ 10,000 for 2 years is ₹ 25. The rate of interest per annum is

(A) 5% (B) 7%
(C) 10% (D) 12%

144. A student goes to school at the rate of $2\frac{1}{2}$ km/h and reaches 6 minutes late. If he travels at the speed of 3 km/h, he is 10 minutes early. The distance (in km) between the school and his house is
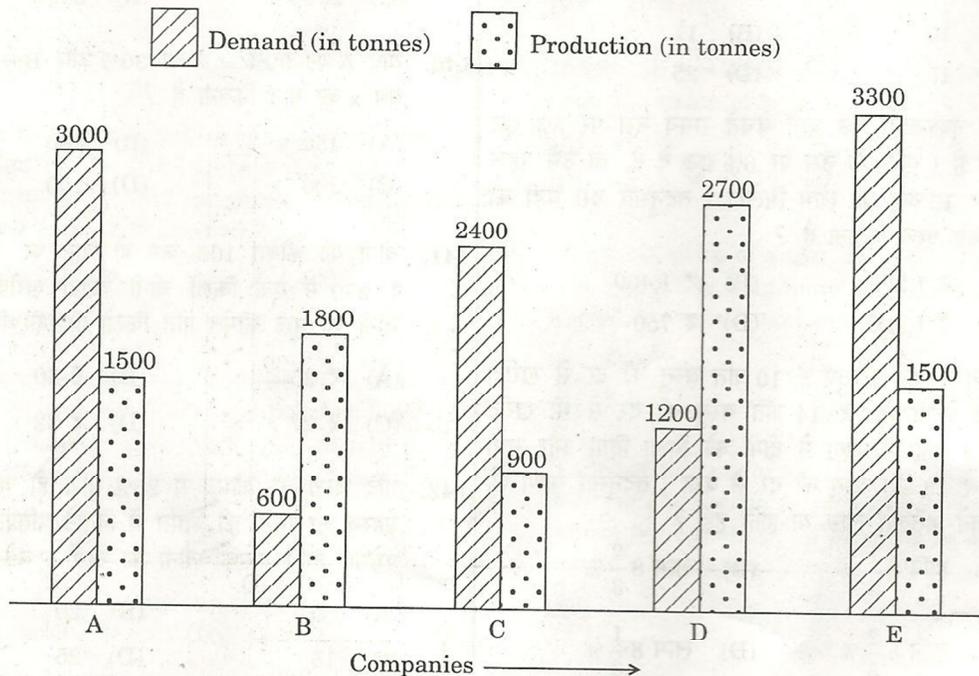
(A) 5 (B) 4
(C) 3 (D) 1

145. A sum of money placed at compound interest doubles itself in 4 years. In how many years will it amount to four times itself ?

(A) 12 years (B) 13 years
(C) 8 years (D) 16 years

146. The simple interest on a sum for 5 years is one-fourth of the sum. The rate of interest per annum is

(A) 5% (B) 6%
(C) 4% (D) 8%

Directions : (Questions No. 147 to 150). The following graph shows the demand and production of cotton by 5 companies A, B, C, D and E. Study the graph and answer questions 147 to 150.

Demand (in tonnes)   Production (in tonnes)

3000 1500 600 1800 2400 900 1200 2700 3300 1500

A   B   C   D   E

Companies ⟶

SPACE FOR ROUGH WORK

147. The production of company D is how many times that of the production of the company A ?

(A) 1·8   (B) 1·5

(C) 0·5   (D) 0·4

148. The demand for company B is what percent of the demand for company C ?

(A) 1·5   (B) 2·5

(C) 25   (D) 30

149. What is the ratio of companies having more demand than production to those having more production than demand ?

(A) 2 : 3   (B) 4 : 1

(C) 3 : 2   (D) 1 : 4

150. What is the difference (in tonnes) between average demand and average production of the five companies taken together ?

(A) 320   (B) 420

(C) 2100   (D) 1050

FOR VISUALLY HANDICAPPED CANDIDATES ONLY

147. A, B and C enter into a partnership with investments in the ratio $\dfrac{7}{2} : \dfrac{4}{3} : \dfrac{6}{5}$. After 4 months, A increases his share by 50%. If the total profit at the end of one year be ₹ 21,600, then B's share in the profit is

(A) ₹ 2,100   (B) ₹ 2,400

(C) ₹ 3,600   (D) ₹ 4,000

148. A person travels 48 km at 12 km/h and further 48 km at 16 km/h. His average speed for the whole journey, in km/h, is

(A) 14   (B) $13\dfrac{4}{7}$

(C) $12\dfrac{3}{7}$ (D) $13\dfrac{5}{7}$

149. The H.C.F. and L.C.M. of two numbers are 13 and 1989 respectively. If one of the numbers is 117, determine the other.

(A) 121   (B) 143

(C) 217   (D) 221

150. A sphere of radius r and a cylinder of the base radius r have equal volumes. If the height of the cylinder is h, then which of the following is true ?

(A) 4r = 3h   (B) 4r = h

(C) h = 3r   (D) h = 2r

SPACE FOR ROUGH WORK

PART D
ENGLISH COMPREHENSION

Directions : In questions no. 151 to 155, some of the sentences have errors and some are correct. Find out which part of a sentence has an error and blacken the rectangle [■] corresponding to the appropriate letter (A, B, C). If a sentence is free from errors, blacken the rectangle corresponding to (D) in the Answer Sheet.

151. His son / is working / very hardly. / No error.
    (A)   (B)   (C)   (D)

152. Do you know that it was I / who has done / this piece of beautiful work ? / No error.
           (A)   (B)   (C)   (D)

153. The company has ordered / some / new equipments. / No error.
          (A)   (B)   (C)   (D)

154. The future of food companies / seems quite secure / owed to ever-growing demand. / No error.
          (A)   (B)   (C)   (D)

155. The vaccine / when hit the Indian market / is dogged by controversy. / No error.
          (A)   (B)   (C)   (D)

Directions : In questions no. 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 rectangle [■] in the Answer Sheet.

156. If you had followed the rules, you _____ disqualified.

    (A) will not be

    (B) would not be

    (C) will not have been

    (D) would not have been

157. The housewife _____ the cakes burning, and ran to switch off the oven.

    (A) smell   (B) smells

    (C) smelt   (D) smelling

158. _____ an old legend, King Shirham lived in India.

    (A) In the event of

    (B) Due to

    (C) According to

    (D) In reference to

159. _____ you leave now, you will be late.

    (A) Until   (B) Till

    (C) Unless   (D) Although

160. The _____ were arrested for illegally hunting the bears.

    (A) poachers   (B) rangers

    (C) soldiers   (D) villagers

161. GENIAL

    (A) Cordial   (B) Unselfish

    (C) Careful   (D) Specific

162. ACCRUE

    (A) Accumulate   (B) Accommodate

    (C) Grow   (D) Suffice

163. LOQUACIOUS

    (A) Talkative   (B) Slow

    (C) Content   (D) Unclear

164. VINDICTIVE

    (A) Imaginative   (B) Accusative

    (C) Spiteful   (D) Aggressive

165. INCLEMENT

    (A) Selfish   (B) Active

    (C) Unfavourable   (D) Inactive

166. SYNTHETIC

    (A) Natural   (B) Plastic

    (C) Cosmetic   (D) Apathetic

167. ACCORD

    (A) Disagreement (B) Welcome

    (C) Disrespect   (D) Conformity

168. INFIRMITY

    (A) Employment   (B) Indisposition

    (C) Strength   (D) Weakness

169. FEASIBLE

    (A) Useful   (B) Impractical

    (C) Uneven   (D) Important

170. METICULOUS

    (A) Forgetful   (B) Destructive

    (C) Careless   (D) Flagrant

171. To be all at sea

    (A) a family voyage

    (B) lost and confused

    (C) in the middle of the ocean

    (D) a string of islands

172. To take to one's heels

    (A) to walk slowly

    (B) to run away

    (C) to march forward

    (D) to hop and jump

173. To bite the dust

    (A) eat voraciously

    (B) have nothing to eat

    (C) eat roots

    (D) None of the above

174. A bolt from the blue

    (A) a delayed event

    (B) an inexplicable event

    (C) an unexpected event

    (D) an unpleasant event

175. Cold comfort

    (A) absurdity

    (B) deception

    (C) slight satisfaction

    (D) foolish proposal

176. My friend lives in a nearby street whose name I have forgotten.

(A) the name of which

(B) which name

(C) of which name

(D) No improvement

177. He both won a medal and a scholarship.

(A) He won a medal and a scholarship both.

(B) Both he won a medal and a scholarship.

(C) He won both a medal and a scholarship.

(D) No improvement

178. He has for good left India.

(A) He has left for good India.

(B) He has left India for good.

(C) Good he has left India.

(D) No improvement

179. We are credibly informed that the murderer has given himself up.

(A) We are informed that the murderer has credibly given himself up.

(B) We are informed that the murderer has given credibly himself up.

(C) We are informed that credibly the murderer has given up himself.

(D) No improvement

180. We generally select one of the most intelligent student of the school for this award.

(A) one of the most intelligent students of the school

(B) one of the intelligent most students of the school

(C) one of the intelligent most student of the school

(D) No improvement

181. Pertaining to cattle

(A) Canine   (B) Feline

(C) Bovine   (D) Verminous

182. To look at someone in an angry or threatening way

(A) Glower   (B) Gnaw

(C) Gnash   (D) Grind

183. A post with little work but high salary

(A) Director   (B) Trustee

(C) Sinecure   (D) Ombudsman

184. Something that causes death

(A) Dangerous   (B) Fatal

(C) Brutal   (D) Horrible

185. A person who writes decoratively

(A) Calligrapher

(B) Collier

(C) Choreographer

(D) Cartographer

186. (A) malaign   (B) arraign
    (C) asigne   (D) degine

187. (A) harrassment   (B) embarrasment
    (C) fulfilment   (D) denoument

188. (A) agnostik   (B) accomplice
    (C) advercity   (D) acrimonous

189. (A) dysentery   (B) momentery
    (C) cemetary   (D) comentary

190. (A) ebulient   (B) jubilant
    (C) iminent   (D) tolerent

PASSAGE (Q. Nos. 191 – 200)

The Solar System has been a complicated wonder for the astronomers. This is a __191__ to which we may never have the exact answer. Man has wondered __192__ the age of the Earth __193__ ancient times. There were all kinds of __194__ that seemed to have the __195__. But man could not begin to __196__ about the question scientifically until about 400 years __197__.

When it was proved that the __198__ revolved round the Sun and the Earth was a __199__ of our Solar System, then scientists knew where to __200__.

191. (A) problem   (B) question
    (C) matter   (D) query

192. (A) around   (B) out
    (C) about   (D) on

193. (A) since   (B) during
    (C) around   (D) from

194. (A) ideas   (B) opinions
    (C) stories   (D) matters

195. (A) solution   (B) novel
    (C) book   (D) answer

196. (A) read   (B) think
    (C) open   (D) guess

197. (A) now   (B) time
    (C) then   (D) ago

198. (A) Moon   (B) time
    (C) Earth   (D) Mars

199. (A) part   (B) division
    (C) opening   (D) centre

200. (A) end   (B) begin
    (C) think   (D) work