ENTRANCE EXAMINATION - XITH

DEFENCE CAREER ACADEMY, AURANGABAD.

As an ISO 9001 : 2008 - Certified

ENT : 2014	Sr. NO.
TIME : 2.00 Hrs.	MAXIMUM MARKS : 100

QUESTION - BOOKLET

GENERAL INSTRUCTIONS

1. Do not carry any book, paper or any other material with you inside the Examination Hall.

2. Carry only writing material with you in the Examination Hall.

3. Keep the Hall Ticket with you ready for scrutiny.

4. Result of this Examination will be displayed on the Notice Board. The Result Sheet will include the successful/ qualified candidates ONLY.

5. All successful candidates indicated on the list shall present themselves for the invetview on the same day.

6. This Test Booklet contains 121 items (Questions). Each item comprises four responses (Answers). You have to select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, Choose Only One response for each item.

7. All the answers must be marked on the Answer Sheet only. Do not write anything on this Test Booklet.

8. 1 to 90 questions carry 1 marks, Q. No. 91 carries 10 marks.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE ASKED TO DO SO

8. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET DOES NOT HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR QUESTION ETC. IF SO, GET IT REPLACED BY A NEW ONE.

9. Ask for a separate paper for rough work.

10. Read the questions carefully, Remember, answers are to be indicated in the Answer Sheet Only. Return the Test Booklet, Rough work papers and the Answer Sheet immediately when asked to do so. You are NOT permitted to take away with you any paper concerning the Examination.

ANSWER SHEET

11. The Answer Sheet contains 90 counts, each subdivided in four { (a) (b) (c) (d)} subdivisions for indicating the correct choice of answers. After having selected the correct choice from the test Booklet, you should indicate that choice by completely blackening the respective circle, DO NOT merely cross the circle. You should indicate correct answer by blackening ONLY ONE circle in each answer. Any answer having more than ONE blackened circle will be treated as WRONG answer.

12. Before starting the answering ensure that you have filled the complete information at the top of this Answer Sheet. Incomplete Answer Sheet will be regarded as invalid.

THANK YOU AND BEST OF LUCK

Q. 1 to 5 : Read the following passage carefully and answer the questions given at the end of it by choosing correct alternative answer.

There are exceptions to the rule of male insects being smaller than the females, and some of these exceptions are intelligible. Size and strength would be an advantage to the males which fight for the possession of the females, and in these cases, as with the stag-beetle (Lucanus), the males are larger than the females. There are, however, other beetles which are not known to fight together, of which the males exceed the females in size, and the meaning of this fact is not known, but in some of these cases, as with the huge Dynasties and Megasoma, we can at least see that there would be no necessity for the males to be smaller than the females, in order to be matured before them, for these beetles are not short-loved, and there would be ample time for the pairing of the sexes.

1. According to the author
   a) male insects are always smaller than females.
   b) in a given species nature provides differences
   c) size and strength protect females from other females.
   d) longevity is characteristic of the Dynasties and Megasoma.

2. Where male beetles are smaller than female beetles, it is because
   a) they have to fight for their mates.   b) they are more intelligent.
   c) they are ephemeral creatures.   d) there is ample time for mating.

3. The paragraph preceding this one probably
   a) discusses a generalization about the size of animals
   b) develops the idea that male insects do not live long after maturity.
   c) Discusses male and female beetles.
   d) Emphasizes that beetles are belligerent animals.

4. The male Lucan us is particularly
   a) adaptable   b) strong   c) intelligent   d) belligerent

Directions : Pick out the correct synonyms for each of the following words.

5. Pure
   a) clean   b) unmixed   c) fresh   d) clear

6. Doubt
   a) ignorance   b) dullness   c) mistake   d) disbelief

7. Triumph
   a) excitement   b) victory   c) gain   d) joy

8. Outstanding
   a) admirable   b) prominent   c) notorious   d) interesting

Directions : Choice the word or phrase (a, b, c, or d) which best completes each sentence

9. He died ………. martyr in the cause of independence.
   a) though   b) a   c) for   d) since

10. He was in trouble because he did not ……….. the instructions.
   a) observe   b) confirm   c) chase   d) follow

11   . This building contains ……… sixty rooms.
     a) of   b) with   c) to   d) none of these

Directions : Pick out the correct Antonyms for each of the following words.

12. Artificial
     a) red   b) natural   c) truthful   d) solid
13. Virtue
     a) crime   b) wickedness   c) fraud   d) vice
14. Shallow
     a) deep   b) hollow   c) hidden   d) high
15. Gather
     a) spend   b) scatter   c) suspend   d) separate

*   **(Directions Questions 16 to 18) : In questions 16 to 18, you will find a sentences with four parts underlined. In some sentences there is an error in one of these parts in the light of the rules of standard written English grammar, correct usage and choice of words. No sentence has more than one error. If you find an error, choose the letter of that underlined part in which you find the error. If you find no error, mark the answer (d).**

16. The committee appointed to investigate into (a)/the said murder (b)/will convene next week to further discuss their strategy. (c)/No error (d)
17. Kamal's habit of (a)/delaying his work (b)/put his colleagues to lot of trouble. (c)/No error (d)
18. No effort has been made at all (a)/to cash on (b)/the refurbished image of Indian tennis. (c)/No error (d)

Instruction : Find the word with correct spellings.

19. a) Nutrition   b) Nutretion   d) Nutrision   d) Nutreetion

20. a) Aothentic   b) Authentik   c) Authentic   d) Authintic

21. What is area of equilateral triangle of side 12 cm?

     a) $3\sqrt{3}$ sq cm   b) $36\sqrt{3}$ sq cm   c) $\sqrt{3}$ sq cm   d) 27 sq cm

22. Area of triangle with perpendicular sides 18 cm and 8 cm, and which includes angle of 90^0 is?

     a) 14 sq cm   b) 28 sq cm   c) 72 sq cm   d) 60 sq cm

23. If $\angle (x + 5)^0$ and $\angle (2x + 40)^0$ are complementary angles then x = ?

     a) 10^0 b) 15^0 c) 20^0 d) None

24. Which of the following quadrilateral have equal sides?

     a) Rectangle   b) Parallelogram   c) Square   d) kite

25. What is the point of intersection of all the diameters in a circle called?

     a) Circumference   b) Chord   c) Centre   d) Radius

26. In quadrilateral ABCD, if $\angle A = 60^0$, $\angle B = 110^0$, $\angle B = \angle D$ then $\angle C = $?

     a) 80^0 b) 110^0 c) 75^0 d) 65^0

27. If perimeter of square is 32 cm, Then its area is ?

     a) 36 sq cm   b) 64 sq cm   c) 84 sq cm   d) None

28. The line which touches the circle into 2 distinct points is known as?

     a) chord   b) tangent   c) secant   d) Normal

29. What is the general form of quadratic equation.

   a) $ax + by = 0$ b) $ax^2 + bx + c = 0$ c) $ax^3 + by + c = 0$ d) None of these

30. Given below are the lengths and breadths of some rectangles in cm. Which rectangle has its diagonal bigger than the length by 1 cm?

   a) 15,9   b) 16,15   d) 12,13   d) 24,7

31. What is the equation of y - axis?

   a) $y = 0$ b) $x = 0$ c) $x = y$ d) None

32. Find distance between origin and pt. p (4,3) ?

   a) 5   b) $\sqrt{13}$ c) 6   d) None

33. The length of a chord passing through the centre of a circle is 7 cm. What is the length of the radius of the circle?

   a) 7 cm   b) 6 cm   c) 3.5 cm   d) 3 cm.

34. Circumcentre of equilateral trangle lies.

   a) on the side   b) Inside the   c) Outside   d) None

35. If AM is median of $\triangle$ ABC, AG = 7.2 then AM = ?
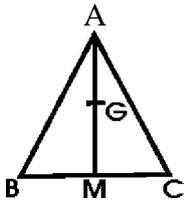
   a) 14.4   b) 3.6   c) 10.8   d) None

Instruction :Answer using diagram (from Q.36 to 39):
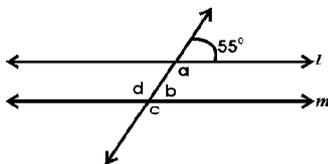
36. m $\angle$ b = ?

   a) 125^0 b) 55^0 c) 140^0 d) None

37. $\angle$ a and $\angle$ d are -

   a) corresponding   b) alternate   c) interior   d) opposite

38. Which of the following pairs in called interior angles?

   a) $\angle$ a , $\angle$ b   b) $\angle$ b, $\angle$ c   c) $\angle$ c , $\angle$ d   d) $\angle$ a, $\angle$ d

39. m $\angle$ C = ?

   a) 55^0 b) 125^0 c) 65^0 d) None

40. Which of the following statement is true?

   a) A cuboid has 6 faces and 8 edges.

   b) A cube has 8 faces and 12 edges.

   c) A cuboid is a cube but a cube is not a cuboid

   d) For a cube and cuboid, the number of faces, edges and vertices are the same.

41. $1 \text{volt} = \dfrac{\rule{3cm}{0.4pt}}{1 \text{ coulomb}}$

   a) 1 ohm   b) 1 watt   c) 1 joule   d) 1 dyne

42. The SI unit of electric potential is the ....

   a) ohm   b) ampere   c) volt d) coulomb

43. The device used for producing a current is called ....

   a) a voltmeter   b) an ammeter   c) a galvanometer   d) a generator

44. An air bubble inside water behaves like a ....

   a) concave lens   b) convex lens   c) convex mirror   d) concave mirror

45. By using a .... light rays incident on it can be converged.

   a) plane mirror   b) convex mirror   c) concave lens   d) convex lens

46. The second period contains .... elements.

   a) 8   b) 2   c) 18   d) 32

47. The electronic configuration of sulphur is ....

   a) (2,8,6)   b) (2,8,1)   c) (2,8,5)   d) (2,8,3)

48. .... is a natural indicator.

   a) Phenolphtalein   b) Methyl orange   c) Litmus   d) Methyl red

49. .... has pH more than 7.

   a) Pure water   b) NaOH solution   c) HCl solution   d) Lemon juice

50. .... is a metal.

   a) Mg   b) S   c) P   d) Br

51. .... is a mode of asexual reproduction.

   a) fission   b) Budding   c) Spore formation d) All of these

52. The number of chromosomes for a particular species is ....

   a) specific   b) variable   c) changing   d) unpredictable

53. Man : XY : : Woman : ....

   a) YX   b) YY   c) XX   d) XZ

54. CO_2 in air is useful for .... in plants.

   a) repiration   b) photosynthesis   c) digestion   d) assimilation

55. .... resources means plants, animals and microorganisms.

   a) Chemical   b) Biological   c) Natural   d) Physical

56. Consider the following statements about Scientific Socialism:

   1) Karl Marx put forward the theory of Scientific Socialism in Communist Manifesto (1848).

   2) According to this theory, economic conditions can never determine the cause of human history.

   Which of the statements given above is / are correct?

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

57. Rajtarangini, authored by Kalhan, describes the history of :

a) Gujrat   b) Bengal   c) Kashmir   d) Punjab

58. Which of the following did not consitute part of the army reforms of Sher Shah?

a) Keeping a large army at the Centre   b) Introduction of a swiftly moving artillery

c) Cash payment to soldiers   c) Introduction of the practic of branding horses

59. Among the percious stones, the most extensive foreign trade during the Gupta age was that of :

a) Diamonds   b) Ruby   c) Pearl   d) Sapphire

60. The Judge of the High Court in India is administered oath of office by:

a) The Chief Justice of the High Court   b) The Governor of the State

c) The President of India   d) The Chief Justice of India

61. Which of the following festivals is celebrated on Prophet Mohammed's birthday?

a) Id-ul-Zuba   b) Id-e-Milad   c) Id-ul-Fitr   d) Muharram

62. The Nobel Peace Prize is awarded in which city?

a) Brussels   b) Geneva   c) Oslo   d) Stockholm

63. Which one of the following pairs of cities have two Headquarters each of Indian Railway Zones?

a) Kolkata and Chennai   b) Kilkata and Mumbai

c) Mumbai and Secunderabad   d) Mumbai and Chennai

64. Which one of the following has recently conferred the Honorary Degree of Doctor of Letters (K.Lit). on UN Secretary General Ban-ki-Moon?

a) Jamia Millia Islamia University   b) Lal Bahadur Shastri Sanskrit University

c) G.G.S. Indraprastha University   d) I.I.T. Delhi

65. Who amongst the following directed the award winning film "Taare Zamin Par"?

a) Madhur Bhandarkar   b) Salman Khan

c) Amir Khan   d) Sanjay Leela Bhansali

66. The hill famous for treating mentally depressed persons in Timal Nadu is.

c) Nilgiri   d) Kutralam   c) Javadi   d) Anaimalai

67. Who among the following was the first Indian to receive the Nobal Prize?

a) Dr. C.V. Raman   b) V.S. Naipal   c) Mother Teresa   d) Rabindranath Tagore

68. Which of the following Twin city is correct?

a) Cochin - Ernakulam   b) Bangalore - Mysore

c) Mumbai - Pune   d) Chennai - Chingleput

69. Who said, "Inflation is u njust but deflation is inexpedient. Of the two, deflation is worse"?

a) J.M. Keynes   b) Amartya Sen   c) J.G. Gurlay   d) J.N. Bhagwati

70. The civilian award bestowed by the President of India to persons for rendering exceptional and distinguished service in any field is

a) Bharat Ratna

b) Padma Shri

c) Padma Vibhushan

d) Padma Bhushan

71. Which portfolio was held by Dr. Rajendra Prasad in the Interim Government formed in the yera 1946?

a) Defence

b) External Affairs and Commonwealth Relations

c) Food and Agriculture

d) None of the above

72. Bhakta Tukaram was a contemporary of which Mughal Emperor?

a) Babar
b) Akbar
c) Jahangir
d) Aurangzeb

73. Which one of the following Indian banks is **not** a nationalised bank?

a) Corporation Bank
b) Dena Bank
c) Federal Bank
d) Vijaya Bank

74. Why is Himalayan region poor in mineral resources?

a) Himalayan region is made up of crystalline rock

b) Displacement of rock strata has disturbed the arrangement of rocks an made it complex.

c) The climatic conditions are not suitable for exploration of minerals.

d) The rugged terrain makes exploration of minerals difficult and costly

75. Albedo effect would be relatively higher in:

a) early morning and late evening

b) early morning only

c) noon

d) late evening only

76. Amarkantak plateau in the Maikal hills marks the origin of the river:

a) Gandak
b) Chambal
c) Narmada
d) Ghaggar

77. How many times at least has the Parliametnto meet in a year?

a) Thrice
b) Twice
c) Once
d) There is no specification

78. Largest producer of gypsum is

a) Maharashtra
b) Rajasthan
c) M.P.
d) Gujrat

79. The first Nuclear Power Station was located in

a) Kota
b) Tarapur
c) Narora
d) Rawae

80. Which one among the following countries won the ICC Women's World Cup, 2013 held in India?

a) India

b) West Indies

c) Australia

d) Sri Lanka

SERIES COMPLETION
NUMBER SERIES

81.   1, 4, 9, 16, 25, (…..)

a) 35   b) 36   c) 48   d) 49

LETTER SERIES

82.   A, C, F, H, H, ?, M

a) L   b) K   c) J   d) I

CODING - DECODING

83.   If a certain language MYSTIFY is coded as NZTUJGZ, how NEMESIS coded in that language?

a) MDLHRDR   b) OFNFTJT   c) ODNTHTDR   d) PGOKUGU

BLOOD RELATIONS

84.   Pointing out to a lady, Rajan said, "She is the daughter of the woman who is the mother of the husband of my mother." Who is the lady to Rajan?

a) Aunt   b) Grand daughter   c) Daughter   d) Sister

RELATION PUZZLE

85.   A is B's sister. C is B's mother. D is C's father. E is D's mother. Then, how is A related to D?

a) Grandmother   b) Grandfather   c) Daughter   d) Grand daughter

86.   If (i) M is brother of N; (ii) B is brother of N; and (iii) M is brother of D, then which of the following statements is definitely true?

a) N is brother of B   b) N is brother of D   c) M is brother of B   d) D is brother of M

DIRECTION SENSE TEST

87.   A man is facing south. He turns 135^0 in the anticlockwise direction and them 180^0 in the clockwise direction. Which direction is he facing now ?

a) North-east   b) North-west   c) South-east   d) South-west

LOGICAL VENN DIAGRAMS

88.   Which of the following diagrams correctly represents Elephants, Wolves, Animals ?
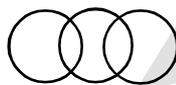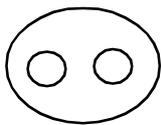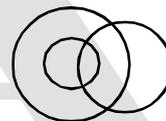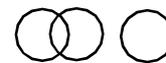
a)   b)   c)   d)

INSERTING THE MISSING CHARACTER

Directions : Find the missing character in each of the following questions.

89.
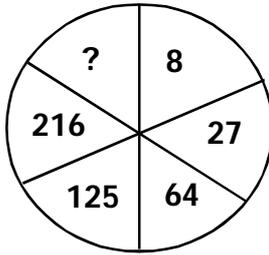
a) 4   b) 305   c) 343   d) 729

SITUATION REACTION TEST

Directions : To each of the following questions, four probable answers have been given. Select the most appropriate alternative as the answer.

90.   You have made some silly mistakes which have been pointed out to you. You will :

a) laugh it away   b) get angry   c) feel miserable   d) feel thankful

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PART - III Maxmium Marks - 10

1) If I were the Education minister of India

2) Mobile : Merits and demerits

3) An ideal Friend

4) Global Warming