

10 Em 21-22.

# BRAIN TOPPER OF THE YEAR 2021 – 22

Brain Tuition Centre, Edathanattukara

Time : 90 Minutes  
Questions : 70

Score : 280

## INSTRUCTIONS

- OMR Answer sheet യാതൊരു കാരണവശാലും മാറ്റി നൽകുന്നതല്ല. അതുകൊണ്ട് ഉത്തരങ്ങളും മറ്റു അനുബന്ധ വിവരങ്ങളും ശ്രദ്ധയോടെ മാത്രം പൂരിപ്പിക്കുക.
- Question Booklet, OMR Answer Sheet എന്നിവ യാതൊരു കാരണവശാലും കൈമാറ്റം ചെയ്യുവാനോ മറ്റു മത്സരാർത്ഥികളുമായി യാതൊരുവിധത്തിലുള്ള ആശയവിനിമയത്തിൽ ഏർപ്പെടുവാനോ പാടുള്ളതല്ല.
- നിങ്ങൾക്ക് ലഭിച്ചിട്ടുള്ള ചോദ്യപേപ്പറിൽ 70 ചോദ്യങ്ങളുമുണ്ട് ആദ്യമേ ഉറപ്പുവരുത്തുക.
- OMR ഉത്തര പേപ്പറിൽ യാതൊരുവിധ വെട്ടി തിരുത്തലുകളോ, മറ്റു വസ്തുക്കൾ ഉപയോഗിച്ചുകൊണ്ടുള്ള മാറ്റം വരുത്തലുകളോ ഉണ്ടാകാൻ പാടുള്ളതല്ല.
- നീല/കറുപ്പ് പേനകൾ മാത്രം ഉത്തരങ്ങൾ രേഖപ്പെടുത്തുന്നതിന് ഉപയോഗിക്കുക. അറ്റൊരു തരത്തിലുള്ള വസ്തുക്കളും പരീക്ഷാഘാളിൽ അനുവദിക്കുന്നതല്ല.
- പരീക്ഷയുടെ നിശ്ചിത സമയത്തിനുള്ളിൽ യാതൊരു കാരണവശാലും മത്സരാർത്ഥികളെ പരീക്ഷാഘാളിന് പുറത്തേക്ക് വിടുന്നതല്ല.
- പരീക്ഷയുടെ അവസാനം OMR ഉത്തരപേപ്പർ അതാത് ഇൻവിജിലറ്ററെ ഏൽപ്പിച്ചുവെന്നു ഉറപ്പിച്ചതിനുശേഷം മാത്രം പരീക്ഷ ഘാളിൽ നിന്ന് പുറത്തിറങ്ങുക.
- ഇൻവിജിലറ്ററുടെ നിർദ്ദേശം ലഭിച്ചതിനു ശേഷം മാത്രമേ ഉത്തരങ്ങൾ രേഖപ്പെടുത്തിത്തുടങ്ങുവാൻ പാടുള്ളൂ.
- ഓരോ ശരിയുത്തരത്തിനും 4 മാർക്ക് വീതം ആയിരിക്കും ലഭിക്കുക. ഓരോ തെറ്റുത്തരങ്ങൾക്കും ഒരു മാർക്ക് വീതം കുറയുകയും ചെയ്യും.
- ഒരേ ചോദ്യത്തിന് ഒന്നിൽ കൂടുതൽ ഉത്തരങ്ങൾ രേഖപ്പെടുത്തിയാൽ ആ ഉത്തരം അസാധുവായി കണക്കാക്കുന്നതാണ്.
- ഏതെങ്കിലും ഘട്ടത്തിൽ എന്തെങ്കിലും സംശയങ്ങൾ ഉണ്ടായാൽ ഇൻവിജിലറ്ററുമായി സംസാരിച്ച് വ്യക്തത വരുത്തിയതിന് ശേഷം മാത്രം മുന്നോട്ടു പോവുക.
- ഇൻവിജിലറ്റർമാരുടെ നിർദ്ദേശങ്ങൾ കൃത്യമായി അനുസരിക്കുക.



Roll No	Signature of student	Signature of invigilator



# BRAIN TOPPER OF THE YEAR 21-22

Brain Tuition Centre, Edathanattukara

B

Mark : 280

English Medium

Time 1:30 Hr

Name :

Roll No :

## 1. Select the correct pairs

- A) Cardiology - treatment of heart
  - B) Ophthalmology - cancer treatment
  - C) Chemotherapy - treatment of disorders of the nervous system
  - D) E.N.T - treatment of ear, nose and throat disorders.
- a) B & C      b) A & B      c) A & D      d) None of these

## 2. The white blood cell that simulates other white blood cells

- a) Neutrophils      b) Basophil      c) Eosinophil      d) Monocyte

## 3. The equipment used to record the electric waves in brain

- a) EEG      b) ECG      c) CT Scan      d) BCG

## 4. Analyse the statements

- i) Filariasis is spread by culex mosquitoes
  - ii) Diphtheria is a bacterial disease
- a) (i) correct (ii) incorrect      b) (i) incorrect (ii) correct  
c) (i) and (ii) incorrect      d) (i) and (ii) correct

## 5. BCG vaccine is used against

- a) AIDS      b) Tuberculosis      c) Dengue fever      d) Malaria

## 6. Location of adrenal gland

- a) Below thalamus      b) In the scrotum      c) About the kidneys      d) Just below the sternum

## 7. The normal level of glucose in blood

- a) 80 - 130 mg/100 ml      b) 70 - 110 mg/100 ml      c) 9 - 11 mg/100 ml      d) 60 - 100 mg/100 ml

## 8. The part of brain which plays major role in the maintenance of homeostasis

- a) Thalamus      b) Hypothalamus      c) Cerebrum      d) Medulla Oblongata

## 9. Read the statements given below

- i) The part where myelinated neurons are present in abundance is called white matter.
  - ii) Nerves are groups of dendrites covered by connective tissue.
- a) i and ii correct      b) i and ii wrong      c) i wrong ii correct      d) i correct ii wrong

## 10. The transparent anterior part of sclera

- a) Conjunctive      b) Cornea      c) Pupil      d) Iris



11. If resistors are connected in series

- a) Effective resistance increases      b) Effective resistance decreases  
c) There is no change in effective resistance      d) All the above

12. Which are the characteristics of Nichrome

- a) High resistivity      b) High melting point  
c) Ability to remain in red hot condition without oxidation      d) All the above

13. Unit of heat energy is \_\_\_\_\_

- a) Ohm      b) Ampere      c) Joule      d) Watts

14. Device in which electrical energy is converted into mechanical energy in \_\_\_\_\_

- a) AC generator      b) DC generator      c) Moving coil microphone      d) Motor

15. Unit of charge is \_\_\_\_\_

- a) Volt      b) Coulomb      c) Milli ampere      d) None of the above

16. In which device split ring commutator is used

- a) AC generator      b) AC motor      c) DC generator      d) None of the above

17. AC current \_\_\_\_\_

- a) Change the direction continuously      b) EMF increases and decreases  
c) Didn't change the direction      d) Option A and Option B

18. Angle of incidence on a plane mirror is 50 degree, what is the value of angle of reflection

- a) 25 degree      b) 100 degree      c) 50 degree      d) None of the above

19. If the object placed at Infinity, the image formed \_\_\_\_\_

- a) At F      b) At C      c) Between C and F      d) Beyond

20. The focal length of rear view mirror of radius of curvature 50 cm is \_\_\_\_\_

- a) +25 cm      b) -25 cm      c) +100 cm      d) -100 cm

21. गंगी पानी लाएंगी जोखू पानी ..... ।

- a) लाएगा      b) लाएगी      c) लाएंगे      d) लएगिम

22. किसका सपना साकार होता है?

- a) रणविजय का      b) मिहिर का      c) कलाम का      d) लूसी मेडम की

23. तारिफ करना इसका मतलब क्या है?

- a) मासूमियत      b) अनुकरण करना      c) प्रशमसा करना      d) नकल करना

24. कानी कुतिया मे विशेषण शब्द कॉन सा है?

- a) भोजन      b) कानी      c) कुतीया      d) दाने

25. राजू हिंदी \_\_\_\_\_ ।

- a) पढ़ने लगा      b) पढ़ने लगे      c) पढ़ने लगी      d) पढ़ने लगीं

26. ग्यारह साल \_\_\_\_\_ लड़का जा रहा था ।

- a) का      b) के      c) की      d) कै



27. बीरबहूठी कहानी के रचैता कौन है ?

- a) प्रेमचंद      b) प्रभात      c) नागर जुन      d) धर्मवीर भारती

28. राष्ट्रीय हिंदी दीवस कब मनाया जाता है ?

- a) जनवरी 10      b) मार्च 8      c) अक्टूबर 2      d) सितम्बर 14

29. सही समानार्थी शब्द लिखे ।

- a) निराशा\_बयान      b) निरंतर\_ओहता      c) स्वयं\_लगातर      d) रीति\_रूढ़ी

30. उसे निहित सर्वनाम लिखे ?

- a) हम      b) वह      c) यह      d) ये

31. If they had written the exam well ,.....

- a) I would have passed      b) they should passed      c) they will pass      d) they could have passed

32. Usually nothing very exciting happened while I was in the banyan tree, but on one particular afternoon I had enough excitement.....

This sentence is taken from the story.....by.....

- a) Adventures in a Banyan Tree, W. B Yeats      b) My sisters Shoes, Majid Majidi  
c) Adventures in a Banyan Tree, Ruskin Bond      d) My Sister's Shoes, W. B. Yeats

33. Find out the Verb from the following sentence

Mr. Thorat was the ring master of the circus.

- a) Ring master      b) circus      c) was      d) of

34. Frame the question for the following sentence

She finishes her work

- a) Does she finish her work?      b) Did you finish her work?  
c) Does she finishes her work?      d) Do she finish her work?

35. Mavrone means.....

- a) God bless you      b) My dear one      c) An expression of sorrow      d) God be with you

36. "The old priest Peter Gilligan

Was weary night and day"

Is an example for

- a) Simile      b) Metaphor      c) Alliteration      d) Rhetorical question

37. 'The sound was a familiar one.' What was the sound?

- a) the sound of snake      b) the sound of rat      c) the sound of mongoose      d) None of these

38. The evening was..... than the morning.

- a) Hot      b) more hotter      c) more hot      d) hotter

39. Lines Written in Early Spring is written by

- a) William Wordsworth      b) W. B. Yeats      c) Bob Dylan      d) Ruskin Bond



40. Find out the Verb Phrase from the following

The cage on the lorry was covered

- a) The cage b) on the lorry c) was covered d) on the lorry was covered

41. According to Greenwich Mean Time is morning 8:30 and 105° west longitude time is?

- a) 2:30 AM b) 2:30 PM c) 1:30 AM d) 1:30 PM

42. The apparent movement of the sun, Coriolis force, differences in heating are responsible for the formation of ———?

- a) Formation of mountain breeze b) Formation of local wind  
c) Formation of cyclone wind d) Formation of monsoon wind

43. Human resource characteristics such as population size, population structure, population growth and population density which includes in features of .....

- a) Qualitative features b) Quantitative features c) Both are right d) Both are wrong

44. Value of the eastings immediately left to the geographic features is considered for identifying a location - this statement is more apt to which of the following

- a) Eastings b) Northings c) Four figure grid reference d) Six figure grid reference

45. When was the goods and service tax introduced in India?

- a) 2017 June 26 b) 2017 July 1 c) 2007 June 1 d) 2007 July 26

46. Match the following.

1. When there is one employee at the top, and the number of employees increases when it reaches to the lower level.	A) Permanence
2. Party interest should not reflect in their work.	B) Hierarchical Organization
3. Every government employee must be skilled in their work.	C) Political Neutrality
4. Persons appointed with will continue their service till the age of retirement.	D) Professionalism

- 1    2    3    4  
a) C   D   B   A  
b) C   B   A   D  
c) B   C   D   A  
d) A   D   C   B

47. When did Mahatma Gandhi propose wardha education plan?

- a) 1937 b) 1938 c) 1939 d) 1932

48. Find out from the given below which is not related with Subhash Chandra Bose

- A. Forward bloc
  - B. Indian republican army
  - C. Jhansi regiment
  - D. Rash Bihari Bose
  - E. Different opinion on Gandhian ideas of struggle
- a) B only      b) B & E      c) C only      d) A & D

49. Characteristics of facism

- A. Adoring the purity of race
  - B. Opposition to Socialism
  - C. Glorifying Democracy
  - D. Diffusion of aggressive nationalism
- Find out the incorrect from the given below.
- a) A & C      b) B & D      c) B & C      d) None of these

50. Match the following

Centres of Revolt		Leaders
1. Faizabad		A. Begum Hazret Mahal
2. Lucknow		B. Moulavi Ahmmedullah
3. Delhi		C. Nanan Saheb, Thantia Topi
4. Kanpur		D. Bahadur Shah II

- I    2    3    4
- a) C    D    A    B
- b) B    A    D    C
- c) D    B    A    C
- d) B    D    A    C

51. Identify the correct electronic configuration of 29 Cu among the following

- a)  $[Ar] 4s^2 3d^{10}$     b)  $[Ar] 3d^{10} 4s^1$     c)  $[Ar] 3d^{10} 4s^2$     d)  $[Ar] 4s^1 3d^{10}$

52. Which is the reducing agent of Alumina

- a) Electricity    b) C    c) CO    d) None of these

53. Find out the equation of reduction in the Zn - Cu galvanic cell.

- a)  $Zn^0 \rightarrow Zn^{2+} + 2\bar{e}$     b)  $Zn^{2+} + 2\bar{e} \rightarrow Zn^0$     c)  $Cu^{2+} + 2\bar{e} \rightarrow Cu^0$     d)  $Cu^0 \rightarrow Cu^{2+} + 2\bar{e}$

54. What will be the the molecular formula of the compound formed from the elements  $9^X$  and  $20^Y$

- a) XY    b)  $Y_2X$     c)  $X_2Y$     d)  $YX_2$

55. Which among the following is the correct option regarding the reaction takes place on the anode during the electrolysis of molten NaCl

- a)  $Na^0 \rightarrow Na^{+1} + 1\bar{e}$ , Oxidation    b)  $2Cl^{-1} + 2\bar{e} \rightarrow Cl_2$ , Reduction
- c)  $Na^{+1} + 1\bar{e} \rightarrow Na$ , Reduction    d)  $2Cl^{-1} \rightarrow Cl_2 + 2\bar{e}$ , Oxidation



56. Choose the incorrect statement/s from the following.

- i) d- block elements show different oxidation States
- ii) The oxides of first group elements will be in the form 'MO'.
- iii) All the p - block elements are non-metals

- a) i, ii, iii      b) ii, iii      c) ii only      d) iii, i

57. Which among the following is the concentration method of zinc blende

- a) Froth floatation    b) Leaching    c) Distillation    d) Roasting

58. Which group including the correct products obtained during the electrolysis of aqueous solution of NaCl.

- |                          |                          |
|--------------------------|--------------------------|
| a) Anode – $\text{Cl}_2$ | b) Anode – Na            |
| Cathode – $\text{H}_2$   | Cathode – $\text{Cl}_2$  |
| Electrolyte – NaCl       | Electrolyte – NaCl       |
| c) Anode – $\text{Cl}_2$ | d) Anode – $\text{Cl}_2$ |
| Cathode – $\text{H}_2$   | Cathode – Na             |
| Electrolyte – NaOH       | Electrolyte – NaOH       |

59. Select the option with correct order of energy of the subshells

- a)  $2s < 3s < 4s < 3d$     b)  $3s < 3p < 3d < 4s$     c)  $3d < 4s < 4p < 5s$     d)  $1s < 3p < 4d < 5s$

60. Choose a correct reaction occur in the blast furnace from the following

- a)  $\text{C} + \text{O}_2 + \text{heat} \rightarrow \text{CO}_2$     b)  $\text{CaSiO}_3 \rightarrow \text{SiO}_2 + \text{CaO}$
- c)  $\text{CO}_2 + \text{C} \rightarrow 2\text{CO} + \text{heat}$     d)  $\text{Fe}_2\text{O}_3 + 3\text{CO} \rightarrow 2\text{Fe} + 3\text{CO}_2$

61. In the given AP series find the number of terms?

5, 8, 11, 14, 17, 20.....50.

- a) 11    b) 13    c) 15    d) None of the mentioned

62. Any point outside the semi-circle will have an angle

- a) Less than 90 degree    b) Greater than 90 degree    c) = 90 degree    d) None of these.

63. A bag has 3 red balls and 5 green balls. If we take a ball from the bag, then what is the probability of getting red balls only?

- a) 3    b) 8    c)  $\frac{3}{8}$     d)  $\frac{8}{3}$

64. Which of the following is not a quadratic equation

- a)  $x^2 + 3x - 5 = 0$     b)  $x^2 + x^3 + 2 = 0$     c)  $3 + x + x^2 = 0$     d)  $x^2 - 9 = 0$  \*

65. The roots of the quadratic equation  $6x^2 - x - 2 = 0$  are

- a)  $\frac{2}{3}, \frac{1}{2}$     b)  $-\frac{2}{3}, \frac{1}{2}$     c)  $\frac{2}{3}, -\frac{1}{2}$     d)  $-\frac{2}{3}, -\frac{1}{2}$

66. The value of  $\tan 60^\circ / \cos 30^\circ$  is equal to:

- a) 0      b) 1      c) 2      d) 3

67. The algebraic expression of arithmetic sequence 12, 15, 18.....

- a)  $3n+9$       b)  $-3n+9$       c)  $-3n-9$       d) None of these

68. What is the common difference of the arithmetic sequence 10, 5, 0, .....

- a) 5      b) -5      c) 15      d) 0

69. In an arithmetic sequence fifth term is 55 and 16<sup>th</sup> term is 176 what is its common difference

- a) -11      b) 11      c) 111      d) 16

70. The product of two consecutive even numbers is 15128 what are the numbers

- a) 122,124      b) 100,102      c) 110,112      d) 124,126

