

Question Booklet No. ....

(To be filled up by the candidate by **blue/black ball-point pen**)

Roll No. 

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Roll No. (Write the digits in words) .....

Serial No. of OMR Answer Sheet .....

Day and Date .....

(Signature of Invigilator)

**INSTRUCTIONS TO CANDIDATES**

(Use only **blue/black ball-point pen** in the space above and on both sides of the **Answer Sheet**)

1. Within 10 minutes of the issue of the Question Booklet, Please ensure that you have got the correct booklet and it contains all the pages in correct sequence and no page/question is missing. In case of faulty Question Booklet, bring it to the notice of the Superintendent/Invigilators immediately to obtain a fresh Question Booklet.
2. Do not bring any loose paper, written or blank, inside the Examination Hall *except the Admit Card without its envelope.*
3. *A separate Answer Sheet is given. It should not be folded or mutilated. A second Answer Sheet shall not be provided.*
4. Write your Roll Number and Serial Number of the Answer Sheet by pen in the space provided above.
5. *On the front page of the Answer Sheet, write by pen your Roll Number in the space provided at the top, and by darkening the circles at the bottom. Also, wherever applicable, write the Question Booklet Number and the Set Number in appropriate places.*
6. *No overwriting is allowed in the entries of Roll No., Question Booklet No. and Set No. (if any) on OMR sheet and Roll No. and OMR sheet No. on the Question Booklet.*
7. *Any changes in the aforesaid-entries is to be verified by the invigilator, otherwise it will be taken as unfair means.*
8. *This Booklet contains 40 multiple choice questions followed by 10 short answer questions. For each MCQ, you are to record the correct option on the Answer Sheet by darkening the appropriate circle in the corresponding row of the Answer Sheet, by pen as mentioned in the guidelines given on the first page of the Answer Sheet. For answering any five short Answer Questions use five Blank pages attached at the end of this Question Booklet.*
9. For each question, darken only one circle on the Answer Sheet. If you darken more than one circle or darken a circle partially, the answer will be treated as incorrect.
10. *Note that the answer once filled in ink cannot be changed. If you do not wish to attempt a question, leave all the circles in the corresponding row blank (such question will be awarded zero marks).*
11. For rough work, use the inner back page of the title cover and the blank page at the end of this Booklet.
12. Deposit *both OMR Answer Sheet and Question Booklet* at the end of the Test.
13. You are not permitted to leave the Examination Hall until the end of the Test.
14. If a candidate attempts to use any form of unfair means, he/she shall be liable to such punishment as the University may determine and impose on him/her.

**FOR ROUGH WORK**

# Research Entrance Test – 2013

No. of Questions : 50

Time : 2 Hours

Full Marks : 200

- Note :**
- (i) This Question Booklet contains 40 Multiple Choice Questions followed by 10 Short Answer Questions.
  - (ii) Attempt as many MCQs as you can. Each MCQ carries 3 (Three) marks. 1 (One) mark will be deducted for each incorrect answer. Zero mark will be awarded for each unattempted question. If more than one alternative answers of MCQs seem to be approximate to the correct answer, choose the closest one.
  - (iii) Answer only 5 Short Answer Questions. Each question carries 16 (Sixteen) marks and should be answered in 150-200 words. Blank 5 (Five) pages attached with this booklet shall only be used for the purpose. Answer each question on separate page, after writing Question No.

1. Most of the land precipitation and evaporation on earth takes place over the :
  - (1) land masses
  - (2) oceans and seas
  - (3) poles of the planet
  - (4) subtropical latitudes
  
2. The downstream portion of a river :
  - (1) generally becomes more sluggish
  - (2) usually has turbulent flows
  - (3) generally is of higher velocity, which is marked by reduced turbulence
  - (4) has lower discharges than do upstream portions
  
3. Which of the following is not a fatty acid ?
  - (1) Stearic acid
  - (2) Palmitic acid
  - (3) Oleic acid
  - (4) Phenyl acetic acid
  
4. Which of the following compounds is not an antibiotic ?
  - (1) Penicillin
  - (2) Chloramine-T
  - (3) Streptomycin
  - (4) Chloramphenicol
  
5. The acceleration with which a particle moves in a straight line, according to the law  $v^2 = 4a(x \sin x + \cos x)$ ,  $v$  being the velocity of the particle at a distance  $x$  from a fixed point, is :
  - (1) 0
  - (2)  $2ax \cos x$
  - (3)  $4ax \cos x$
  - (4)  $2ax \sin x$

6. If  $\begin{bmatrix} 2 & 4 \\ 1 & 3 \end{bmatrix} A \begin{bmatrix} 0 & 2 \\ 1 & 3 \end{bmatrix} = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ , then the matrix A is :

(1)  $\begin{bmatrix} 3 & -4 \\ 3/4 & -1 \end{bmatrix}$

(2)  $\begin{bmatrix} -13/4 & 3/2 \\ 5/4 & -1/2 \end{bmatrix}$

(3)  $\begin{bmatrix} -17/4 & 3/4 \\ -7/4 & -1/4 \end{bmatrix}$

(4)  $\begin{bmatrix} 5/4 & 11/4 \\ 3 & -9/4 \end{bmatrix}$

7. If the error in the measurement of radius of sphere is 0.3%, then the percentage error in the measurement of its volume is :

(1) 0.15%

(2) 0.6%

(3) 0.9%

(4) 0.03%

8. The resistance of series combination of two resistances is S. When they are joined in parallel, the total resistance is P. If  $S = nP$ , then the minimum possible value of n is :

(1) 3

(2) 4

(3) 2.1

(4) 0.89

9. Mitochondria are associated with the function of :

(1) cellular digestion

(2) circulation

(3) protein synthesis

(4) cellular respiration

10. In which parts of eyes, rods and cones are present ?

(1) Retina

(2) Iris

(3) Cornea

(4) Lens

11. Attitude scales are used to measure :
- (1) Judgement      (2) Fact      (3) Ideas      (4) Opinion
12. PERT was developed by :
- (1) Chandrashekhar      (2) Boozallen Hamilton  
(3) U. R. Rao      (4) Newton
13. Functional leaders are recognized due to :
- (1) Their specialized knowledge and functions in society  
(2) Their influence  
(3) Traditions  
(4) Political system
14. Flag method is :
- (1) Group contact method      (2) Individual contact method  
(3) Mass contact method      (4) Public contact method
15. Television broadcast was started in India in the year :
- (1) 1955      (2) 1956      (3) 1959      (4) 1960
16. Govt. of India launched the National Food Security Mission in :
- (1) 2002      (2) 2005      (3) 2007      (4) 1999
17. Decentralization through democratic bodies was recommended by :
- (1) Dr. B. R. Ambedkar      (2) Balwant Rai Mehta  
(3) Mohan Mehta      (4) Jawahar Lal Nehru
18. Sevagram attempt was started under the supervision of :
- (1) Rabindranath Tagore      (2) Mahatma Gandhi  
(3) Albert Mayer      (4) F. L. Bryne
19. In PRA, what is the best method to study farming system ?
- (1) Resource mapping      (2) Venn Diagram  
(3) Sociogram      (4) Social mapping

- 20.** Demonstration showing how to do things :
- (1) Method demonstration                      (2) Result demonstration  
(3) Training    (4) Frontline demonstration
- 21.** The word extension was coined in which country ?
- (1) U. K.    (2) U. S. A.  
(3) Netherlands                                      (4) France
- 22.** Deliberate sampling is also known as :
- (1) Purposive sampling                      (2) Cluster sampling  
(3) Sequential sampling                      (4) Stratified sampling
- 23.** Cellulose, hemicellulose and legnin fibres collectively known as :
- (1) Carbohydrates                              (2) Fats  
(3) Proteins    (4) Vitamins
- 24.** Which proteolytic enzyme is able to digest collagen ?
- (1) Rennin                      (2) Pepsin                      (3) Sucrase                      (4) Maltase
- 25.** Abnormal formation of red blood cells due to prolonged and severe folic acid deficiency causes :
- (1) Megaloblastic Anaemia                      (2) Sickle Cell Anaemia  
(3) Pernicious Anaemia                              (4) Haemophilia
- 26.** Muscle contraction and response of nerves are regulated by mineral elements present in body fluid are :
- (1) Sodium, Potassium, Calcium and Magnesium  
(2) Sodium, Potassium, Zinc and Calcium  
(3) Sodium, Phosphorus, Zinc and Potassium  
(4) Calcium, Zinc, Sodium and Iron
- 27.** A food mixed with gastric juice forms a semi solid mass which is called :
- (1) Bolus                      (2) Residue  
(3) Chyme                      (4) Chylomicrones

28. The functional component of two important co-enzymes – NAD and NADP is :  
 (1) Riboflavin      (2) Thiamin      (3) Pyridoxine      (4) Niacin
29. Green leafy vegetables, cabbage and lettuce are good source of :  
 (1) Starch      (2) Omega 3 fatty acids  
 (3) Triglycerides      (4) Cholesterol
30. The term Tabula rasa was given by :  
 (1) Frobel      (2) John Locke      (3) Watson      (4) Rousseau
31. Developmental stage given by Erikson "Trust vs Mistrust resembles with stage given by Frued .....
- (1) Genital stage      (2) Differentiation stage  
 (3) Oral stage      (4) Phallic
32. Socio-cultural theory was given by :  
 (1) Watson      (2) Bandura      (3) Vygotsky      (4) Kohelberg
33. Identity crisis occurs in :  
 (1) Late childhood      (2) Adulthood  
 (3) Adolescence      (4) Early childhood
34. A distribution free test used in testing a hypothesis concerning no difference among two sets of data is :  
 (1) Fisher Irwin test      (2) McNemer test  
 (3) Rank Sum test      (4) Signed Rank test
35. The Number of children is an example of :  
 (1) Continuous variable      (2) Non continuous variable  
 (3) Extraneous variable      (4) Control group
36. ANOVA is a :  
 (1) Multivariate analysis of variance  
 (2) Multiple regression analysis  
 (3) Multiple discriminant analysis  
 (4) Canonical analysis



37. Usually length of cotton fibre is :  
(1) 1 inch (2) 2 inch (3) 3 inch (4) 4 inch
38. What kind of fibre is rayon ?  
(1) Natural (2) Vegetable (3) Artificial (4) Animal
39. Assignment of numbers of basketball players in order to identify them is an example of :  
(1) Ordinal scale (2) Interval scale  
(3) Ratio scale (4) Nominal scale
40. A powerful synthetic cleaning agent and grease remover for very dirty greasy cotton articles is :  
(1) Sodium bi carbonate (2) Lissopal N  
(3) Potassium permagnate (4) Benzene

*Attempt any five questions. Write answer in 150-200 words. Each question carries 16 marks. Answer each question on separate page, after writing Question Number.*

1. Explain Edgor Dale's "Cone of experience".
2. Write the role of indigenous communication chennels in rural upliftment.
3. Make a brief sketch of research proposal on any topic of your choice.
4. Why research is necessary in the field of Home Science ? Discuss.
5. Suggest remedites for eradicating malnutrition from the country.
6. What is nucleus ? Write in detail about Nutrigenomics.
7. Discuss foods standards.
8. Explain Programme Evaluation and Review Technique. (PERT).
9. Explain research and write its objectives.
10. Write the role of computer in research.

*Roll No. :* .....

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**Q. No. :**