

Booklet Type

A

Booklet No.

700997

THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA, VADODARA

Ph. D. ENTRANCE TEST (PET) 2023

Signature of Invigilator

Roll.
No.

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Paper - I

Maximum Marks: 50

No. Of Printed Pages: 8

Instruction for the Candidate:

1. This paper consists of **FIFTY (50)** multiple choice type questions. Each Question carries **ONE (1)** mark.
2. There is no Negative Marking for Wrong Answer.
3. A separate OMR Answer Sheet has been provided to answer questions. Your answers will be evaluated based on your response in the OMR Sheet only. No credit will be given for any answering made in question booklet.
4. Defective question booklet or OMR if noticed may immediately replace by the concerned invigilator.
5. Write roll number, subject code, booklet type, category and other information correctly in the OMR Sheet else your OMR Sheet will not be evaluated by machine.
6. Select most appropriate answer to the question and darken appropriate oval on the OMR answer sheet, with black / blue ball pen only. DO NOT USE PENCIL for darkening. In case of over writing on any answer, the same will be treated as invalid. Each question has exactly one correct answer and has four alternative responses (A), (B), (C) and (D). You have to darken the circle as indicated below on the correct response against each item.
Example: (A) (B) (C) (D) where (B) is correct response.
7. Rough Work is to be done in the end of this booklet.
8. If you write your Name, Roll Number, Phone Number or put any mark on any part of the OMR Answer Sheet, except for the space allotted for the relevant entries, which may disclose your identity, or use abusive language or employ any other unfair means, such as change of response by scratching or using white fluid, you will render yourself liable to disqualification.
9. Calculators, Log tables any other calculating devices, mobiles, slide rule, text manuals etc are NOT allowed in the examination hall. If any of above is seized from the candidates during examination time; he/ she will be immediately debarred from the examination and corresponding disciplinary action will be initiated by the Center Supervisor as deemed fit.
10. DO NOT FOLD or TEAR OMR Answer sheet as machine will not be able to recognize torn or folded OMR Answer sheet.
11. **You have to return the OMR Answer Sheet to the invigilator at the end of the examination compulsorily** and must not carry it with you outside the Examination Hall. You are however, allowed to carry original question booklet on conclusion of examination.

Paper – I

Note: This paper consists of **FIFTY (50)** multiple choice type questions. Each Question carries **ONE (1)** mark.

- 01) Effective teachers are required to have
A) Knowledge, Skill and Attitude
B) Skill, Attitude and Vision
C) Aptitude, Knowledge and Emotions
D) Skills, Vision and Aptitude
- 02) Learners trying to develop their potential have a need for
A) Security
B) Achievement
C) Sympathy
D) Recognition
- 03) Teachers who are high in Intelligence Quotient are usually high in
A) Social skills
B) Analytical skills
C) Empathy skills
D) Intuitive skills
- 04) Student-Centred Methods of Teaching are
A) Lecture Method and Discussion Method
B) Demonstration Method and Project Method
C) Project Method and Assignment Method
D) Lecture cum Demonstration Method
- 05) MOOC enables you to
A) Learn at your own pace and time
B) Learn only during specific hours
C) Learn in a physical classroom
D) Learn under constant teacher supervision
- 06) Effective Interpersonal communication happens when the message is
A) Understood Accurately
B) Received Accurately
C) Interpreted Accurately
D) Encoded Accurately
- 07) The Communication between two classmates is an example of
A) Upward Communication
B) Downward Communication
C) Lateral Communication
D) Selective Communication
- 08) _____ is not an important function of Communication.
A) Gossiping
B) Conflict Resolution
C) Decision -Making
D) Catharsis
- 09) An important tool of communication is
A) Words
B) Symbols
C) Digital
D) Language

- 10) The receiver of the message when gives oral comments of appreciation to the sender of the message he is giving
A) Verbal and positive Feedback
B) Oral and Intrapersonal Feedback
C) Non-verbal and positive Feedback
D) Oral and Positive Feedback

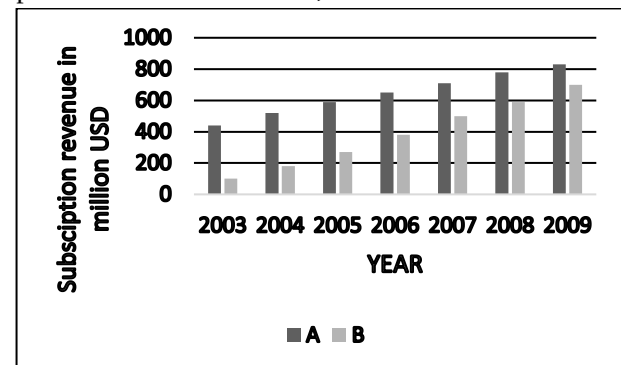
Read the passage carefully and answer the following questions:

Your exclusive right to reproduce, publish, perform or otherwise distribute an original, tangible work is your copyright. You have the ownership of the work you have produced. Intellectual property is very similar to copyright but different at the same time. The main difference between the two is that IP protects rights to intangible works such as inventions, ideas, symbols and designs, rather than rights to fixed forms of expression such as text, pictures and music recordings. In present times copyright and IP are important because they recognize that creative works need to be protected from theft just as we protect our personal property. However, it is commonly observed that the copyright or IP holder may often not be the creator of that work. Institutions may hold the copyright or IP rights over the material their employees produce. It is critical to understand that copyright and IP laws differ from country to country.

- 11) Having copyright on your work means that
A) You cannot reproduce your work.
B) No one can reproduce your work.
C) Others can reproduce your work
D) Close family can reproduce your work
- 12) Designs of new cars will be protected by
A) Intellectual Property right
B) Automobile Rights
C) Copyright
D) Legal Rights
- 13) 'Intangible' means
A) Discernible by touch
B) Material
C) Abstract
D) Physical
- 14) Copyright and IP have special significance today because of
A) Hackers
B) Thefts
C) Frauds
D) Espionage

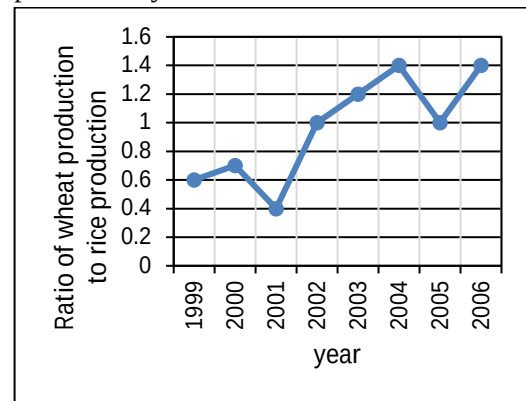
- 15) All copyright and IP holders
- Have created the original work
 - May not have created the original work
 - Have partially created the original work
 - Have in halves created the original work.
- 16) A researcher divides the population into Medical, Engineering and Social Sciences students and using the random digit table he selects some of them from each. This is technically called
- stratified sampling
 - stratified random sampling
 - representative sampling
 - none of these
- 17) According to the UGC regulations, at what percentage of plagiarism, the registration for a programme of a student will be cancelled?
- More than 10%
 - More than 20%
 - More than 40%
 - More than 60%
- 18) Study of the phenomenon, event, situation or development through a detailed analysis and intensive inquiry, is typically a/an:
- Assessment
 - Case study
 - Survey
 - Field study
- 19) If the test items cover all the domains which it attempts to test, it is referred to as:
- Content validity
 - Construct validity
 - External validity
 - Internal validity
- 20) When a researcher prepares a series of questions that all interviewees in the same order, it is called
- Unstructured interview
 - Semi-structured interview
 - Structured interview
 - Private interview
- 21) _____ is a non-profit domain
- .com
 - .in
 - .org
 - All of these
- 22) Email was created in _____
- 1980
 - 1990
 - 1971
 - 1975
- 23) The Digital India is an umbrella programme on being transformative, that is to realize IT + IT = IT. Here the three IT's stand for
- Indian Talent, Information Technology, India Together
 - Indian Talent, Information Technology, India Tomorrow
 - Indian Talent, Indian Technique, India Tomorrow
 - Indian Technique, Information Technology, India Tomorrow
- 24) Gyankosh built on open source application is known as _____
- M space
 - Swayam
 - HP labs
 - Space
- 25) The term OER coined was coined in the year
- 2001
 - 2002
 - 2009
 - 2008
- 26) Which of the following natural hazards is not hydro-meteorological?
- Tsunami
 - Tropical cyclone
 - Sea erosion
 - Snow avalanche
- 27) The name of chemicals which emit with vinyl floors is called
- Phthalates
 - Chorines
 - Pathogens
 - Vinyl oxidize
- 28) Global warming during winter becomes more noticeable at the:
- Equator
 - Poles
 - Tropic of Cancer
 - Tropic of Capricorn
- 29) Bitumen is obtained from:
- Forests and Plants
 - Kerosene oil
 - Crude oil
 - Underground mines
- 30) The type of soil group that is largest in India is:
- Red soil
 - Black soil
 - Sandy soil
 - Mountain soil

- 31) The Chairman of the National Knowledge Commission Report 2006
 A) D.S. Kothari
 B) Amartya Sen
 C) Sam Pitroda
 D) Azim Premji
- 32) The apex body in the area of Teacher Education in India is _____
 A) UGC
 B) MHRD
 C) NCTE
 D) NCERT
- 33) Which of the following Commission first decentralized the primary education?
 A) Hunter Commission
 B) Mudaliar Commission
 C) Kothari Commission
 D) Sadler Commission
- 34) Value education can be best provided through:
 A) Discussions on scriptural texts
 B) Lectures/discourses on values
 C) Seminars / symposia on values
 D) Mentoring / reflective sessions on values
- 35) The University Grants Commission was established with the following aims:
 a) Promotion of research and development in higher education
 b) Identifying and sustaining institutions of potential learning
 c) Capacity building of teachers
 d) Providing autonomy to each and every higher educational institution in India



While the subscription in Europe has been growing steadily towards that of the US, the growth rate in Europe seems to be declining. Which of the following is the closest to the percentage change in growth rate of 2007 (as compared to 2006) relative to the growth rate of 2005 (as compared to 2004)?

- A) 17
 B) 20
 C) 35
 D) 60
- 37) The following graph shows the ratio of wheat production to rice production of a state in India over a period of 7 years from the 1999-2006.



If the total annual grain requirement (wheat and rice together) of the state is 5 lakh tons and if the rice production during 2001 was 3 lakh tons, how much grain had to be imported from another state of India to fulfill the requirement?

- A) 2.00 lakh tons
 B) 1.55 lakh tons
 C) 1.05 lakh tons
 D) 0.8 lakh tons
- 38) The following table shows the price of a commodity (in '000 of Rs.) for two different years, for various states of a country:

State	Price (Year 2015)	Price(Year 2020)
A	2.50	2.73
B	2.86	3.03
C	2.92	2.95
D	2.84	2.98
E	2.71	2.57
F	2.65	2.75

For the state that witnessed a negative change in the price of the commodity, what was the approximate magnitude of the change in terms of percentage ?

- A) 20
 B) 15
 C) 10
 D) 5

- 39) A farmer has 5 acres of land suitable to grow rice or dal or both, 64 man days of human labour and amount \$1600 as working capital. The labour requirement to produce rice and dal in an acre is 8 man days and 16 man days respectively while the cash requirements to grow rice and dal in an acre is \$400 and \$200 respectively. The profit ratio of produce per acre of rice and dal is 1:2. Which of the following combination of production is possible?

- A) Rice in 4 acres and Dal in 1 acre
- B) Rice in 1 acre and Dal in 4 acres
- C) Rice in 2.5 acres and Dal in 2.5 acres
- D) Rice in 3.5 acres and Dal in 1.5 acres

- 40) A professor gave 5 assignments – a, b, c, d and e – to five students P, Q, R, S and T, as part of a group assignment. In a group assignment, all the assignments given must be completed and at a time only one student can work on a particular assignment. The following table shows the times (in hours) taken by each student to complete the assignments.

Student	Assignment				
	a	b	c	d	e
P	2	5	1.5	3	5
Q	4	2	3	1	4
R	1	3	4	2	1.5
S	1.5	2.5	3.5	3	3
T	5	4	3.5	2	4

The professor decided to form a group of Q, R and S to complete all the 5 assignments. What will be the minimum time required by the group to complete all the 5 assignments?

- A) 3.5 hours
 - B) 4 hours
 - C) 4.5 hours
 - D) 5 hours
- 41) A quiz competition was organized in a school and the performance of students was recorded on paper with an ink pen. But somehow the paper got wet, and some information went missing. The information which was readable on the paper was as follows:

	Average	Good	Excellent	Total
Male			12	
Female				36
Total		33		

Moreover, the scorer had some clues which are:

- I. Half the students were either excellent or good.
- II. 40% of the students were females.
- III. One-third of the male students were average.

What proportion of good students were male?

- A) 0.73
- B) 0
- C) 0.4
- D) 0.5

- 42) 5% of the passengers who boarded a flight do not like coffee, tea and ice cream and 10% like all the three. 20% like coffee and tea, 25% like ice cream and coffee, and 25% like ice cream and tea. 55% like coffee, 50% like tea and 50% like ice cream. The number of passengers who like only coffee is greater than the passengers who like only ice cream by

- A) 50%
- B) 100%
- C) 25%
- D) 0%

- 43) In this question there is a main statement, followed by four statements P, Q, R and S. Choose the ordered pair of statements, where the first statement implies the second, and the two statements are logically consistent with the main statement.

Main Statement: One gets chocolate every time one visits the restaurant.

P: I got a chocolate.

Q: I didn't get a chocolate.

R: I didn't visit the restaurant.

S: I visited the restaurant.

- A) PS
- B) QS
- C) SP
- D) PR

- 44) A boy passes through 7 lanes to reach his school. Lane T is between his house and Lane L. The third lane from his school is Lane K. Lane D is immediately before the Lane Y. He passes Lane S at the end, Lane L is between Lane T and Lane D, the sixth lane from his house is Lane E. How many lanes are there between Lane L and Lane E?

- A) One
- B) Two
- C) Three
- D) Four

45) This question consists of a statement followed by two conclusions:

Statement: Reputed management institutes focus on both quality and advertisement.

Conclusions:

(I) There are only two important factors for a reputed management institute – quality and advertising.

(II) Small management institutes focus on only one of quality and advertising.

A) Only conclusion I follows.

B) Only conclusion II follows.

C) Conclusions I and II both follow.

D) Neither conclusion I nor conclusion II follows.

46) Which pair of rational numbers lies between $\frac{1}{4}$ and $\frac{3}{4}$?

A) $\frac{262}{1000}$, $\frac{752}{1000}$

B) $\frac{252}{1000}$, $\frac{748}{1000}$

C) $\frac{24}{100}$, $\frac{74}{100}$

D) $\frac{9}{40}$, $\frac{31}{40}$

47) The average age of a committee of 8 members is 40 years. A member aged 55 years retired and his place was taken by another member aged 39 years. The average age of the present committee is

A) 35 years

B) 36 years

C) 38 years

D) 39 years

48) By selling an article for Rs. 110, a man loses 12%. For how much price should he sell it to gain 8% ?

A) 120

B) 125

C) 130

D) 135

49) Mr. X wants to sell his scooter. There are three offers:

(i) at cash payment of Rs. 8100, (ii) at a credit of Rs. 8250 to be paid after 6 months at a simple interest rate of $6\frac{1}{4}\%$ and (iii) at a credit of Rs. 8300 to be paid after 6 months at a compound interest rate of 7%.

Which is the better offer?

A) Offer (i)

B) Offer (ii)

C) Offer (iii)

D) All the three offers are equally good

50) What will come in place of the blank (---) in the following numerical series?

4, 11, 25, 53, 109, --- ?

A) 221

B) 234

C) 212

D) 222

Rough Work: