



N. M. M. M.

Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD)
Re-accredited with 'A++' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Bachelor of Education / B.Ed. Special Education (VI/II) Degree Examination – May 2023
IV Semester

Class: II B.Ed. / II B.Ed. Special Education (VI/ II)
2020 Batch (Repeater)

Time : 3 Hours
Max. Marks : 100

21BEDM14 / 21BDSM14 / 18BDSM14 School Subject I: Professionalising
Mathematics Education

Course Outcomes:

- CO1: Describe the steps in content analysis
CO2: Critically analyse the quality of mathematics textbook
CO3: Design and develop e-content lesson
CO4: Explain the types of research and develop research attitude among students
CO5: Organize co-curricular activities in mathematics

Part A **10 x 1 = 10**
Choose the Correct Answer

1. If the side of the square is 5 cm, then its perimeter is CO1 K3
a. 20 b. 25 c. 15 d. 22
2. The sum of two negative integer is CO1 K2
a. positive integer b. negative integer
c. zero d. none of the above
3. Workbooks are designed not to teach but to provide CO2 K3
a. teaching b. learning c. practice d. to show
4. If a die is thrown in the air, the probability of getting even numbers is CO2 K2
a. $\frac{1}{2}$ b. $\frac{1}{6}$ c. $\frac{1}{3}$ d. $\frac{2}{3}$
5. E-content is also known as CO3 K2
a. course content b. digital content c. e-learning d. content learning
6. In ADDIE model, ADDIE stands for CO3 K3
a. Arrange, Design, Develop, Implement, Evaluate
b. Analyze, Design, Develop, Import, Evaluate
c. Analyze, Design, Develop, Implement, Evaluate
d. Arrange, Design, Develop, Implement, Educate
7. Action-research can be understood as CO4 K3
a. longitudinal research
b. applied research
c. kind of research to solve specific problem discussions
d. some specific character
8. If the null hypothesis is false then which of the following is accepted. CO4 K2
a. Null Hypothesis b. Positive Hypothesis
c. Negative Hypothesis d. Alternate Hypothesis
9. Curriculum is CO5 K1
a. course b. syllabus
c. co curricular activities d. overall activities of an institution
10. _____ is known as the father of mathematics. CO5 K2
a. Archimedes b. Plato c. Euler d. Euclid

Part B**5 x 6 = 30****Answer ALL questions****Each answer should not exceed 400 words or two pages**

- 11.a. Base area and volume of a solid right circular cylinder are 13.86 sq.cm, and 69.3 cu.cm respectively. Find its height and curved surface area. (or) CO1 K5
- 11.b. Elucidate the steps in content analysis. CO1 K3
- 12.a. Explain the need and importance of textbook. (or) CO2 K2
- 12.b. Discuss the criteria of a good textbook. CO2 K3
- 13.a. Explicate the importance of e-content development. (or) CO3 K2
- 13.b. Discuss the ways of preparing script for e-content. CO3 K3
- 14.a. Elaborate the characteristics of research. (or) CO4 K3
- 14.b. Explain the different types of variables. CO4 K5
- 15.a. Narrate the importance of mathematics club. (or) CO5 K6
- 15.b. Give six examples for recreational activities. CO5 K2

Part C**5 x 12 = 60****Answer ALL questions****Each answer should not exceed 800 words or four pages**

- 16.a. If $U = \{0, 1, 2, 3, 4, 5, 6\}$, $A = \{1, 3, 5\}$ and $B = \{0, 3, 4, 5\}$ then verify
- i. $(A \cup B)' = A' \cap B'$ and
- ii. $(A \cap B)' = A' \cup B'$ (or) CO1 K5
- 16.b. Prove that the points A (3, 5), B (6, 2), C (3,-1) and D (0, 2) taken in order are the vertices of a square. CO1 K6
- 17.a. Critically analyse VII standard mathematics text book. (or) CO2 K5
- 17.b. Propose the characteristics of the learner centric and creative textbook for future learners. CO2 K6
- 18.a. Prepare an e-content lesson for any topic in mathematics. (or) CO3 K6
- 18.b. Explain the phases involved in e-content development. Discuss the challenges of e-content development in the present educational context. CO3 K3
- 19.a. Differentiate applied research from basic research. (any twelve) (or) CO4 K4
- 19.b. Justify the need for conducting action research in classroom. CO4 K6
- 20.a. Analyse the need for field trips and excursions for school students. (or) CO5 K5
- 20.b. Puzzles and Riddles are the best recreational activities of mathematics - Comment. CO5 K6
