

THE UNIVERSITY OF ZAMBIA
In association with
THE TECHNICAL AND VOCATIONAL TEACHERS' COLLEGE

DECEMBER 2011 Diploma Examinations.

Subject: **EDUCATIONAL TECHNOLOGY (Option 1)**

Time: - 3hours

Total Marks

100

READ THESE INSTRUCTIONS FIRST

1. Write your college number in the space provided on the top of your answer booklet. Do the same with any additional paper(s) you may use as answer sheet.
2. This paper has three sections. A, B and C.
3. Answer all questions in section A and B.
4. Answer question 25 and any other two (2) questions of your choice in section C
5. Read each question carefully before responding to it.
6. Marks will be given for good handwriting and clarity of expression.

This question paper consist of 7 printed pages

Do not turn the page until you are told to so

SECTION A.

For each of the following items 1 – 20, select the correct answer by writing the corresponding letter in your booklet. Each question carries one (1) mark.

1. For which of the following purposes is it most appropriate to use an Internet discussion group?
 - (a) to participate in real-time discussions online
 - (b) to ask questions and provide information on a specific topic
 - (c) to ensure that posted information is authoritative and accurate
 - (d) to find an index of Web sites addressing a specific topic
2. The cut-outs, pictures and diagrams which are given a backing of flannel will stick to
 - (a) Magnetic boards
 - (b) Chalkboards
 - (c) Felt boards
 - (d) Bulletin boards
3. A teacher is interested in using technology to expand students' understanding of the process of scientific inquiry. Which of the following student activities would most effectively meet this goal?
 - (a) using simulation software to design and conduct investigations
 - (b) using the Internet to participate in virtual field trips
 - (c) using the Internet to research recent scientific discoveries
 - (d) using database software to organize scientific data
4. Small scale models are
 - (a) Sample of real things
 - (b) Smaller than real size
 - (c) Same scale as real things
 - (d) Larger than the real things
5. In motion pictures projection, persistence of vision will result in
 - (a) Pure magic
 - (b) Synchronisation of pictures
 - (c) Continuous action in the picture
 - (d) Rapid movement of frames
6. The importance of a model as an educational aid is reflected through one of the following experiences. Which one is it?

- (a) The excitement of the learners seeing it.
 - (b) The practical experience it gives the learners through manipulation, dismantling and assembling
 - (c) It reflects the teacher's expertise
 - (d) The practical experience it gives the learners through switching the on and off
7. For effective presentation of transparencies on the OHP, Simply turn off the projector when you want your audience's – attention
 Turn it on again when you wish to direct their attention to the visual
 How would you achieve the same when presenting with powerpoint using an LCD projector and a laptop?
- (a) Press Ctrl+B twice
 - (b) Press the key with the letter B or W
 - (c) Switch off the projector
 - (d) Press Alt+Ctrl + delete
8. Motion pictures are valuable because
- (a) They compensate in differences in background sounds.
 - (b) There is no teacher interference
 - (c) They can replace the teacher
 - (d) They bypass some of the intellectual barriers
9. When using motion pictures for teaching why is it not advisable to switch off the lights?
- (a) it exposes learners to a danger
 - (b) some learners might fall asleep
 - (c) it might expose learners to a lot of talking .
 - (d) to remind the students that this is not passive viewing.
10. A chart that illustrates chronological relationships between events is a
- (a) Chronological chart
 - (b) Time line chart
 - (c) Organisation chart
 - (d) Process chart
11. Which one of these is the odd one out
- (a) Electronic White Boards
 - (b) Bulletin Boards

- (c) Dioramas
- (d) Flip charts

12. What determines the size of the letters on a chart?

- (a) The size of the paper
- (b) The type of font used
- (c) The viewing distance
- (d) The language used

13. In the use of computers, what does the term "GIGO" stand for?

- (a) Get in Get out
- (b) Garbage in Garbage out
- (c) Games in Games out
- (d) Google input Google output

14. What is the name given to the type of educational aids that have the applicability of all the subjects of the curriculum?

- (a) Mobile aids
- (b) Visual aids
- (c) Audio-Visual aids
- (d) Pictorial aids

15. Which one of the following will determine the durability of finished charts?

- (a) The material you select to use when making charts
- (b) The skill you develop during training
- (c) The time you take to prepare the charts
- (d) The knowledge you have to produce charts

16. The chalkboard is not good for ...

- (a) Mathematical calculations
- (b) The systematic display of virtually the entire subject matter.
- (c) The display of a 'skeleton guide' to a lesson.
- (d) The display of specific items (maps, diagrams, tables, etc) during a lesson

17. Which one of the following teaching aids gives the learner understanding, feelings and visualization of the teacher's concept?

- (a) A good Video on the concept
- (b) A simulator
- (c) A very detailed chart on the concept

(d) A demonstration Lesson

18. Why is it not advisable to hold the bulb of an overhead projector with your bare hands?

- (a) You might break the bulb
- (b) It has radio active elements
- (c) The grease from your hand might form hot spots that may lead to the bulb breaking
- (d) The bulb may be too hot

19. Which among the following is not an element of importance of colour in a visual aid?

- (a) Make abstractions real
- (b) Attract attention
- (c) Add interest
- (d) Improve visibility

20. Retrieval of charts can be easy if they are stored

- a) According to content
- b) According to colour
- c) According to subject
- d) According to size

SECTION B.

Write briefly on the following items (21 -24). For each item your answer should not exceed a quarter of a page. Write in a short essay format. Each question carries 5 marks.

- 21. Purpose of an Internet discussion group.
- 22. Educational games
- 23. Pedagogical purposes of a field trip.
- 24. Factors to consider when selecting text books

SECTION C

Question 25 is compulsory. Answer question 25 and any other two questions from this section. All questions carry 20 marks.

- 25 (a) Educators understand the dangers of plunging into abstract concepts and principles without first building a foundation of concrete experience...per Johannes Amos Comenius in 1592
What does this mean to the teacher? (8 marks)
- (b) Identify 3 methods of preserving non-projected materials and 3 reasons why. (6 marks)
- (c) Differentiate between the “**bold and simple** charts “and the “**detailed** charts”. (6 marks)
26. (a) List five types of non-projected materials and cite application for each in training (10 marks)
- (b) (i) Give a brief description of a Gantt chart. (3 marks)
(ii) Explain briefly, what this type of a chart mentioned in (i) above is used for? (2marks)
(iii) Charts are used as a means of communication in teaching and learning. In what three forms can this be presented? (3 marks)
- (c) If a teacher decides to use pictures in teaching, what two factors should he or she consider for maximizing students’ benefit from the pictures? (2 marks)
27. (a) When text books are used in teaching and learning situations, two advantages are identified as follows:
(i) They help individualise instructions and
(ii) that they are flexible teaching aids.
Briefly explain the meaning of each of these statements. (4 marks)
- (b) (ii) What is the term “**transparency**” used for? (2 marks)
(iii) With regard to the use of transparencies, what are overlays? (3 marks)
- (c) It has been observed and proved that too frequently teachers use instructional aids without reference to guiding principles of how the experiences contained in those aids will be used by the learners.
Give five reasons why you should use teaching aids? (10 marks)

28. (a) Versatility and Accuracy are said to be part of the advantages of a computer. Briefly explain the two advantages. (6 marks)
- (b) A text book is a very important teaching aid, and when used effectively it would be a very useful resource for both the teacher and the learner. However the text book has a number of limitations. State any five limitations of a text book. (10 marks)
- (c) Though computers are very useful in teaching and learning in today's world where technology has advanced so much, they have limitations that a teacher wishing to use them in teaching must be aware of. What do you consider to be the limitations of computers? (4 marks)

End of Examination