CINEC CAMPUS
Beyond A Graduate

PAST PAPERS

Faculty	Department / Section/Division
Not Applicable	Learning Resource Centre

Past Papers

Education & Training Course: B.ED (HONOURS) In Information Technology

(Year 1 – Semester II)

2021 - 2022

Document Control & Approving Authority	Senior Director – Quality Management & Administration

CINEC CAMPUS
Beyond A Graduate

END SEMESTER EXAMINATION QUESTION PAPER

CODE - QP

Approved for Quality Management System

EDUCATION & TRAINING COURSE: B.ED (HONOURS) IN INFORMATION TECHNOLOGY

COURSE CODE: LC – 0851

YEAR I – SEMESTER II

INTRODUCTION TO COMPUTER SYSTEMS– BDI3044

Faculty	*Department / Section/Division*
Humanities and Education	*Education*

INSTRUCTIONS TO CANDIDATES	*Date of the examination: 2022.08.29*
Candidates could be disqualified if you violate examination rules.	*Duration of the examination = 03 hours*
Candidates are not allowed to communicate with and disturb fellow candidates during the examination.	*Total Marks = 100 marks*

This paper contains SIX (6) Questions. You need to answer five questions only.

Question 01

(i) Convert the following into Octal Number Systems
- 234
- 67.5

(04 Marks)

(ii) What is the difference between Fixed Point and Floating Point Number Systems? Explain. (04 Marks)

(iii) Convert following into IEEE Single Precision representation
- -1
- +125
- -75.25

(12 Marks)

(Total marks =20)

Question 02

(i) Add the following Binary Numbers.

1	1		1	0	0	
1	0	+	1	0	1	+

(04 Marks)

(ii) Divide Following Binary Numbers.

1111 Divide by 11

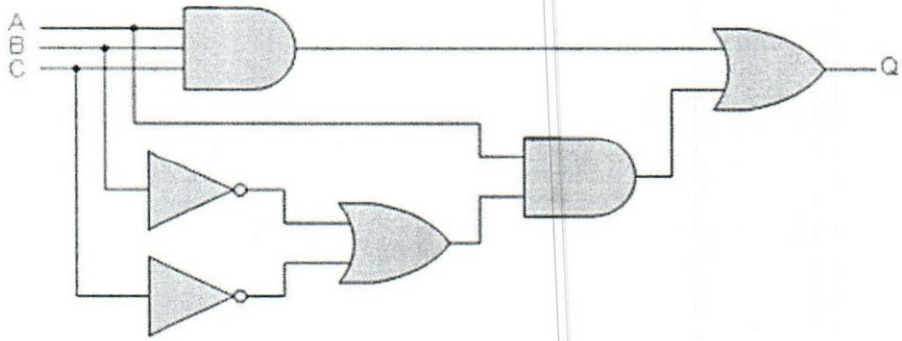
10101 Divide by 11 (08 Marks)

(iii) Explain FOUR Main Functional Units of a Computer. (08 Marks)

(Total marks =20)

Question 03

Consider the Following Logic Gate



(i) Write the Boolean Expression for the Gate (06 Marks)
(ii) Draw the Truth Table for the expression. (08 Marks)
(iii) Simplify the Expression as much as you can, using BOOLEAN ALGEBRA Rules. (06 Marks)

(Total marks =20)

Question 04

Find the K -Map below and simplify it as much as you can.

CD \ AB	00	01	11	10
00	0	0	1	1
01	1	1	0	0
11	1	1	0	0
10	0	0	1	1

(Total marks =20)

Question 05

(i) Explain What is CPU and explain it's Main units as well. (12 Marks)

(ii) Explain Special Purpose registers. Explain about at least 4 registers. (08 Marks)

(Total marks =20)

Question 06

(i) Explain 3 types of Printers (12 Marks)

(ii) Compare SRAM and DRAM. Use 2 points in comparison. (04 Marks)

(iii) Briefly explain about LCD Screens. (04 Marks)

(Total marks =20)

----------*END OF THE QUESTION PAPER*----------

Library

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CINEC CAMPUS
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END SEMESTER EXAMINATION QUESTION PAPER

CODE - QP

Approved for Quality Management System

EDUCATION & TRAINING COURSE: B.ED (HONOURS) IN INFORMATION TECHNOLOGY

COURSE CODE: LC – 0851

YEAR I – SEMESTER II

TEACHING METHODS– BDP3053

Faculty	Department / Section/Division
Humanities & Education	Education

INSTRUCTIONS TO CANDIDATES	Date of the examination: 2022.08.25
Candidates could be disqualified if you violate examination rules.	Duration of the examination = 03 hours
Candidates are not allowed to communicate with and disturb fellow candidates during the examination.	Total Marks = 100 marks

Answer five (05) questions only

Question 01

i. Differentiate the two concepts **'Teaching and Learning'**. (6 marks)

ii. Briefly explain the two learning models, **Pedagogical model and Andragogic model**. (6 marks)

iii. Figure out Experience, Reflection, Learning model to optimize learning introduced by **Ian Reece and Stephen Walker** and discuss significance of the model in details (8 marks)

Question 02

i. Elucidate two teaching roles, **'Traditional role and Modern role'.** (6 marks)

ii. "Teachers might best provide the experiences so as to make the learning as easy and quick as possible. We might consider two possible approaches to the design of a teaching programme" Describe the **two approaches** to design of a teaching programme in brief. (6 marks)

iii. Sketch out and Discuss **Basic Teaching Model** introduced by **Ian Reece and Stephen Walker.** (8 marks)

Question 03

i. State the **six (06)** main theories of Learning in order. (6 marks)
ii. Explain how learning takes place according to **Pavlov and Skinner** with suitable figures. (6 marks)
iii. Discuss how **Behaviorism and Cognitivism** is used in the classrooms. (8 marks)

Question 04

"A theory of teaching is a set of interrelated constructs, definitions, propositions which present a systematic view of teaching."

i. Give the classification of three types of teaching theories with subsequent theories come under each type of teaching theory in a diagram. (8 marks)
ii. Discuss learning events and corresponding instructional events in **Gagne's hierarchical theory of Instruction.** (6 marks)
iii. Discuss four features specified in instruction in **Bruner's Cognitive Developmental Theory of Instruction.** (6 marks)

Question 05

i. Briefly describe the three concepts, Learning experience, Learning objectives and Learning outcomes. (6 marks)
ii. Explain **three (03)** factors to be followed in designing effective learning experiences. (6 marks)
iii. Figure out Dale's Cone of Experience and discuss how it is used by teachers in planning and designing learning experiences. (8 marks)

Question 06

"Kolb's theory is concerned with the learner's internal cognitive processes."

i. Figure out **Kolb's Learning Cycle**. (6 marks)
ii. Briefly explain four-stages of Learning Cycle and discuss the relationship between the four-stages of learning. (6 marks)
iii. Discuss the meanings of **four Learning Styles** separately introduced by Kolb with a figure. (8 marks)

Question 07

i. What is a teaching method? Briefly explain. (4 marks)
ii. List out minimum of **ten (10)** teaching methods and briefly describe four (04) of them. (8 marks)
iii. List out advantages and disadvantages of two teaching methods that you listed out in question (ii). (8 marks)

----------END OF THE QUESTION PAPER----------

CINEC CAMPUS
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END SEMESTER EXAMINATION QUESTION PAPER
CODE - QP
Approved for Quality Management System

EDUCATION & TRAINING COURSE: B.ED (HONOURS) IN INFORMATION TECHNOLOGY
COURSE CODE: LC – 0851
YEAR 1 – SEMESTER 2
COMPUTER NETWORK - BDI3054

Faculty	Department / Section/Division
Humanities and Education	Education

INSTRUCTIONS TO CANDIDATES	Date of the examination: 2021.12.02
Candidates could be disqualified if you violate examination rules.	Duration of the examination = 03 hours
Candidates are not allowed to communicate with and disturb fellow candidates during the examination.	Total Marks = 100 marks

The total number of pages in the question paper is two (02)
There are eight (08) questions in the examination paper
Including the Compulsory question-answer any four questions only

Question 01 (Compulsory)

Explain the differences between FDMA, TDMA, CDMA with diagrams (Total marks =25)

Question 02

(i) Explain what is a Computer Network? (10 marks)
(ii) What is a Resistance indicated in the characteristics of a copper cable? (15 marks)

(Total marks =25)

Question 03

(i) How is a LAN different from a WAN? Explain briefly (10 marks)
(ii) Explain Electro Magnetism in communication (15 marks)

(Total marks =25)

Question 04

(i) Through a step-by-step process indicate the 'Total Usable IP Address Range' for the IP Address 180.168.150.250 / 25. (10 marks)
(ii) What is Attenuation in transmission issues (15 marks)

(Total marks =25)

Question 05

(i) What is EMI? How does it occur? (10 marks)

(ii) Explain PCM with diagrams (15 marks)

(Total marks =25)

Question 06

(i) Describe Coupling Losses in transmission (10 marks)

(ii) What is Modulation? Explain in detail (15 marks)

(Total marks =25)

Question 07

(i) What is Omni Directional Antennas? (10 marks)

(ii) How is MUX different from DEMUX in Multiplexing (15 marks)

(Total marks =25)

Question 08

(i) How is Analog Signal different from Digital Signal (10 marks)

(ii) What is an E1 Channel (15 marks)

(Total marks =25)

----------END OF THE QUESTION PAPER----------

CINEC CAMPUS
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END SEMESTER EXAMINATION QUESTION PAPER
CODE - QP
Approved for Quality Management System

EDUCATION & TRAINING COURSE: B.ED (HONOURS) IN INFORMATION TECHNOLOGY
COURSE CODE: LC – 0851
YEAR I – SEMESTER II
INTRODUCTION TO COMPUTER SYSTEMS– BDI3044

Faculty	Department / Section/Division
Humanities and Education	Education

INSTRUCTIONS TO CANDIDATES	Date of the examination: 2021.12.03
Candidates could be disqualified if you violate examination rules.	Duration of the examination = 03 hours
Candidates are not allowed to communicate with and disturb fellow candidates during the examination.	Total Marks = 100 marks

This paper contains SIX (6) Questions. You need to answer Four (04) questions only.

Question 01

1. Conversion from Octal to hexadecimal (10 Marks)
   i. 7_8
   ii. 65_8
   iii. 723_8
   iv. 45125_8
   v. 177326_8

2. Conversion from hexadecimal to binary (15 Marks)
   i. $2C_{16}$
   ii. $4EF_{16}$
   iii. $78D_{16}$
   iv. $98AE_{16}$
   v. $39BEF_{16}$

(Total marks =25)

Question 02

(i) Add the following Binary Numbers.

1	1		1	1	0	
1	1	+	1	1	1	+

(04 Marks)

(ii) Divide Following Binary Numbers.

1111 Divide by 11

10101 Divide by 11 (08 Marks)

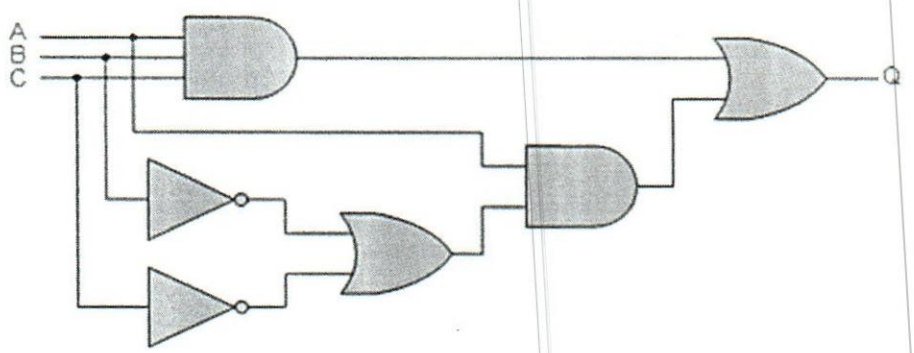
(iii) What is Machine Language? Explain. (05 Marks)

(iv) Explain " Hexa Decimal Number Systems". (08 Marks)

(Total marks =25)

Question 03

Consider the Following Logic Gate



(i) Write the Boolean Expression for the Gate (07 Marks)

(ii) Draw the Truth Table for the expression. (10 Marks)

(iii) Simplify the Expression as much as you can, using BOOLEAN ALGEBRA Rules.(08 Marks)

(Total marks =25)

Question 04

A Circuit has FOUR Natural binary encoded inputs D, C, B, A Where D is the most significant bit. These values represent 0 to 15 in decimal. It has a single output F.

F is 1, if the input on D,C,B, A is in the range 3 to 7 (inclusive) or 12 to 15 (inclusive).

(i) Draw the truth table for the above scenario. (15 Marks)
(ii) Obtain the simplified version using K Maps Technique. (06 Marks)
(iii) Construct the Logic gate for the Simplified version. (04 Marks)

(Total marks =25)

Question 05

(i) List down 4 types of Digital Computers and explain each. (13 Marks)
(ii) Write 4 places where ICT is used (12 Marks)

(Total marks =25)

Question 06

(i) What is ' Computer Memory'? Explain. (04 Marks)
(ii) Compare RAM and ROM . Use 4 points in your comparison. (10 Marks)
(iii) What is " Mother Board"? Explain. (05 Marks)
(iv) What is Parity Checking? Explain by giving an example (04 Marks)

(Total marks =25)

----------END OF THE QUESTION PAPER----------

Library

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END SEMESTER EXAMINATION QUESTION PAPER
CODE - QP
Approved for Quality Management System

EDUCATION & TRAINING COURSE: B.ED (HONOURS) IN INFORMATION TECHNOLOGY
COURSE CODE: LC – 0851
YEAR I – SEMESTER II
SOFTWARE PROCESS MODELING - BDI4074

Faculty	*Department / Section/Division*
Humanities and Education	*Education*

INSTRUCTIONS TO CANDIDATES	*Date of the examination: 2021.12.17*
Candidates could be disqualified if you violate examination rules.	*Duration of the examination = 1.5 hours*
Candidates are not allowed to communicate with and disturb fellow candidates during the examination.	*Total Marks = 20*

This paper consists of twenty (20) MCQ questions. Answer all questions.

01. What is the most suitable Software Development Life Cycle model for a complex, high-risk project?
    (i) Iterative model
    (ii) Waterfall model
    (iii) Spiral model
    (iv) Incremental model

02. Select the correct definition for a 'Genetic Software'.
    (i) Customize software is produced for a particular customer requirement
    (ii) Software which are produced by a development organization and sold on the open market.
    (iii) Software which are not used by companies.
    (iv) Any program that run inside the computer.

03. What is the correct representation of a process?
    (i) Data → process → Data
    (ii) Input process→ Process→ output process
    (iii) Input → Process → output
    (iv) Output, process, input

04. Select the incorrect answer.
'Software validation can be done by:'
(i) Unit testing
(ii) System testing
(iii) Acceptance testing
(iv) Feasibility Studying

05. Which one is not a phase of an incremental model?
(i) Requirement gathering
(ii) Risk analysis
(iii) Maintenance
(iv) Testing

06. Select the incorrect user story.
(i) As a teacher, I try to enter lecture materials to the system. So that, I can send lecture materials to students before start the session.
(ii) As a principal, I want to see all staff details through the system.
(iii) As a librarian, I want to register all members. So that, member can login to the system.
(iv) As a library member, I want to see book availability. So that I can know what is the next available date of that particular book.

Question 7-10 are based on the given scenarios. Select the most suitable Software Development Life Cycle model according to the given scenarios.

07. A development team is developing a system for a public library. Team has well experience on implementing this kind of systems.
(i) Incremental Model
(ii) Prototype Model
(iii) Spiral Model
(iv) Waterfall Model

08. A public bank is requiring to implement a system which is connecting all branches. Development team has identified that the system is including several interfaces. But the team has less experience on developing such a system.
(i) Waterfall Model
(ii) Prototype with Spiral Model
(iii) Incremental Model
(iv) Iterative Model

09. A software team is going to create a computer game. They plan to add a feedback option for that game. According to the players feedbacks, development team is going to do changes to the game in future.
(i) Iterative Model
(ii) Incremental Model

(iii) Spiral Model
(iv) Prototype Model

10. A complex project with high risk.
    (i) Waterfall Model
    (ii) Iterative Model
    (iii) Incremental Model
    (iv) Spiral Model

11. Which is the incorrect component that used to draw the 'Use-Case diagram'?
    (i) System
    (ii) Actors
    (iii) End node
    (iv) Relationship/Link

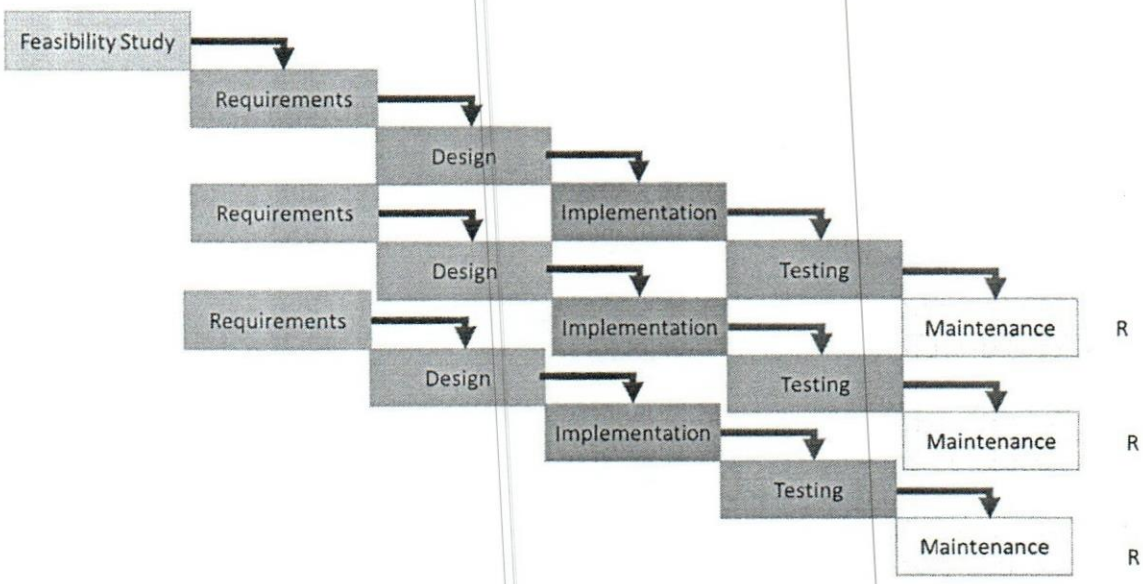
12. When discussing 'Requirement Specification' under 'Requirement Engineering', 3C's are another important point. These 3C's are consisting:
    (i) Card, Coordination, Confirmation
    (ii) Card, Conversion, Coordination
    (iii) Card, Conversation, Confirmation
    (iv) Card, Coordination, Conversation

13. Select the correct user-story card for a 'Online Shopping Center".
    (i) As a customer, I want to add more than one item to the shopping cart.
    (ii) As a manager, I try to enter all items to the system.
    (iii) I want to enter card details for the payment.
    (iv) I want to buy items as a card payment.

14. What is the 'SRS'?
    (i) The process of defining, documenting and maintaining the requirements.
    (ii) The document which lays out all requirements in written and diagrammatic descriptions about the system which is going to develop.
    (iii) The process of gathering and defining service provided by the system.
    (iv) The document providing a list of points regarding a product or process.

15. What are the activities consisting in Requirement Engineering Process? Select two.
    (i) Feasibility Study
    (ii) Elicitation
    (iii) Specification
    (iv) Designing

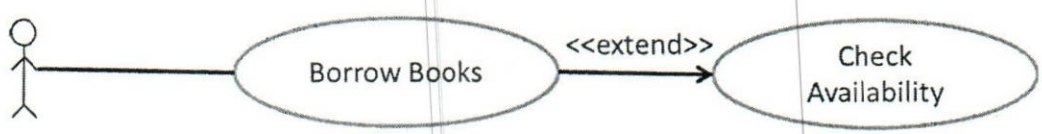
16. Select the correct SDLC model for the given representation.



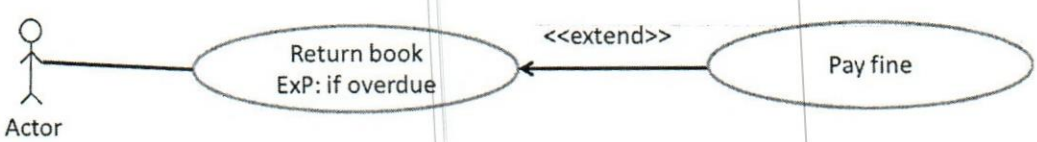
(i) Waterfall Model
(ii) Iterative Model
(iii) Prototype Model
(iv) Incremental Model

17. What is the correct representation of 'extend' relationship in use-case diagram?

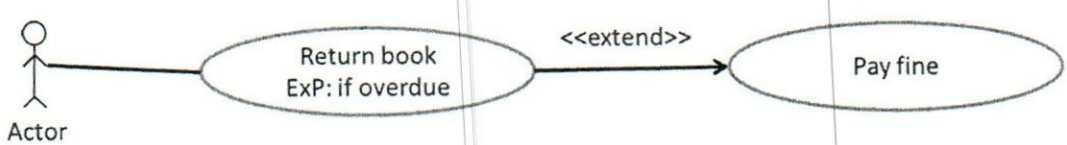
(i)



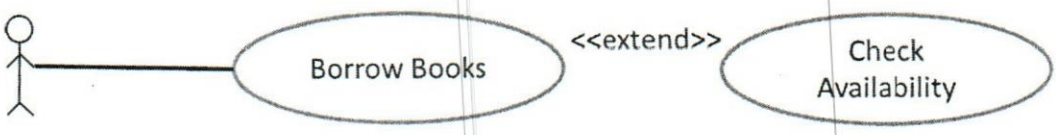
(ii)



(iii)



(iv)



18. Which is not a non-functional requirement?
    (i) Quality
    (ii) Availability
    (iii) Performance
    (iv) Insert

19. Which one is not an advantage of waterfall model?
    (i) Easy to manage.
    (ii) Requirements are very well understood.
    (iii) Easy to manage risk.
    (iv) Easy to arrange tasks.

20. How do you gather the requirements from the user?
    (i) Writing the SRS.
    (ii) Keep open interviews.
    (iii) Get close interviews.
    (iv) Observing and analyzing how people actually work.

----------END OF THE QUESTION PAPER----------

CINEC CAMPUS
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END SEMESTER Examination Question Paper
Code - QP
Approved for Quality Management System
EDUCATION & TRAINING COURSE: B.ED (HONOURS) IN INFORMATION TECHNOLOGY
COURSE CODE: LC – 0851
YEAR I – SEMESTER 2
TEACHING METHODS - GENERAL & SPECIAL - BDP3053

Faculty	*Department / Section/Division*
Humanities and Education	*Education*

Instructions to Candidates	*Date of the examination: 2021.12.01*
Candidates could be disqualified if you violate examination rules.	*Duration of the examination = 03 hours*
Candidates are not allowed to communicate with and disturb fellow candidates during the examination.	*Total Marks = 100 marks*

Answer five (05) questions only

QUESTION 1

A teacher requires not only knowledge of subject matter, but knowledge of how students learn and how to transform them into active learners.

(i) Briefly explain the concept of teaching and learning. (4 marks)
(ii) Describe three ways how students learn. (4 marks)
(iii) Discuss VARK Model. (5 marks)
(iv) "Kolb's experiential learning style theory is typically represented by a four-stage learning cycle in which the learner 'touches all the bases'". Elucidate this statement. (7 marks)

QUESTION 2

Multiple Intelligence theory proposes different intelligences to account for a broader range of human potential in children and adults.

(i) Briefly explain Multiple intelligence theory. (4 marks)
(ii) As a teacher how do you use Multiple Intelligences in Teaching and Learning. (5 marks)
(iii) Describe characteristics or nature of Teaching Method (5 marks)
(iv) "When designing LT Methods there are areas/factors to be considered". Discuss. (6 marks)

QUESTION 3

Teacher direct strategies, student centered strategies and Individualized leaning methods are very important as strategies of instruction.

(I) Name **three** methods that Direct Instructional strategy includes. (3 marks)
(II) What are key philosophical principles of direct instructional strategy? (5 marks)
(III) "In teacher centered method teaching and assessment are viewed as two separate entities". Elucidate this statement. (6 marks)
(IV) "It is fairly high-tech in Flipped classroom method". Do you agree with this statement? Justify your answer. (6 marks)

QUESTION 4

Teacher needs to set effective learning experiences aiming at learner involvement and performance in learning.

(I) Define the concept "Learning Experience". (4 Marks)
(II) Differentiate "Learning Objective" and "Learning Outcome". (4 Marks)
(III) Name the steps of an effective lesson design and discuss the role of each step in designing a lesson. (6 Marks)
(IV) "Constructive Alignment shows the organization of overall instructional process". Interpret the statement by figuring out the Constructive Alignment. (6 Marks)

QUESTION 5

Dale's cone of experience is a tool to help instructors make decisions about resources and activities.

(I) Explain 'Dale's Cone of Experience'. (3 Marks)
(II) Name **three** active learning experiences and **three** passive learning experiences. (3 Marks)
(III) Discuss the relationship between Jerome Bruner's classification of learning experiences and Dale's cone of experiences. (6 Marks)
(IV) "Dale's cone of experience supports the instructors to arrange instructional sessions effectively". Discuss the statement highlighting the advantages of using Dale's cone of experience in classroom sessions. (8 Marks)

QUESTION 6

Lesson plans are systematic records of a teacher's thoughts.

(I) Give three internal and external reasons for lesson planning. (3 Marks)
(II) Give three benefits of daily lesson planning. (3 Marks)
(III) Discuss how Yinger's Model could be used in lesson planning. (6 Marks)
(IV) Show the generic components of a lesson plan with an example. (8 Marks)

QUESTION 7

"Teaching and Learning Materials" is a generic term used to describe the resources teachers use to organize the teaching and learning process.

(I) Classify teaching and learning resources available in the modern classrooms. (6 Marks)
(II) Give three advantages and disadvantages of using Text book as an instructional resource. (6 Marks)
(III) "Learning resource means a resource used for educational purposes in any format". Discuss the statement providing examples for different learning resource formats and their benefits. (8 Marks)

----------*END OF THE QUESTION PAPER*----------

Library

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CINEC CAMPUS
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MID SEMESTER EXAMINATION QUESTION PAPER

CODE - QP

Approved for Quality Management System

EDUCATION & TRAINING COURSE: B.ED (HONOURS) IN INFORMATION TECHNOLOGY

COURSE CODE: LC – 0851

YEAR I – SEMESTER II

COMPUTER NETWORKS – BDI3054

Faculty	*Department / Section/Division*
Humanities and Education	*Education Department*

INSTRUCTIONS TO CANDIDATES	*Date of the examination: 2022.02.28*
Candidates could be disqualified if you violate examination rules.	*Duration of the examination = 1 1/2hours*
Candidates are not allowed to communicate with and disturb fellow candidates during the examination.	*Total Marks = 100 Marks*

Note – **Answer all the questions**

There are five (05) questions in two(02) pages

This is a Closed Book Examination

Question 01 (20 Marks)

Using the IP Address 192.168.100.10 / 26 answer the following questions

a) What is the Broadcast Address? (05 marks)

b) What is the total number of IP addresses in this Address? (05 marks)

c) What is the total number of usable IP addresses in this Address? (05 marks)

d) Which chunk number does the Address fall under? (05 marks)

Question 02 (20 Marks)

a) What is a Computer Network? (05 marks)

b) Explain what a LAN is? (05 marks)

c) What is an ISP and explain briefly in regards (10 marks)

Question 03 (20 Marks)

a) If connecting different devices in a network which copper cable are you going to use? (05 marks)

b) What is a Default Gateway? (05 marks)

c) Explain the Problems of Transmission Media? (10 marks)

Question 04 (20 Marks)

a) Explain what is an User Execution mode of a router? (05 marks)

b) How is Source different from Destination? (05 marks)

c) What is a Routing Protocol? Explain in detail (10 marks)

Question 05 (20 Marks)

a) What does a ping command execute in Cisco Packet Tracer? (05 marks)

b) Explain the History of Communication in around the world taking examples (05 marks)

c) Explain the advantages and disadvantages of Amplification (10 marks)

----------END OF THE QUESTION PAPER----------

Library

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CINEC CAMPUS
Beyond A Graduate

MID SEMESTER EXAMINATION QUESTION PAPER

CODE - QP

Approved for Quality Management System

EDUCATION & TRAINING COURSE: B.ED (HONOURS) IN INFORMATION TECHNOLOGY

COURSE CODE: LC – 0851

YEAR I – SEMESTER II

INTRODUCTION TO COMPUTER SYSTEMS – BDI3044

Faculty	Department / Section/Division
Humanities and Education	Education Department

INSTRUCTIONS TO CANDIDATES	Date of the examination: 2022.02.28
Candidates could be disqualified if you violate examination rules.	Duration of the examination = 1 1/2hours
Candidates are not allowed to communicate with and disturb fellow candidates during the examination.	Total Marks = 20 Marks

Answer TWO questions only.

Question 01

a) What is the "Computer"? Explain (01 marks)

b) Convert following into IEEE Single precision notation.
+85.625 (03 Marks)

c) Name 3 methods used to represent negative integers in Computers. Explain each using examples as well. (06 Marks)

Question 02

a) Explain main parts in the CPU. (05 marks)

b) Convert **7F6** into Binary format. (05 marks)

Question 03

a) Convert +37.25 in to Fixed Point Representation. (02 marks)

b) COMPARE RAM and ROM. Use 4 points in your comparison. (08 marks)

----------END OF THE QUESTION PAPER----------