CINEC CAMPUS
Beyond A Graduate

FINAL EXAMINATION QUESTION PAPER

CODE - QP

Approved for Quality Management System

EDUCATION & TRAINING COURSE: DIPLOMA IN TEACHING MATHEMATICS AND SCIENCE

COURSE CODE: LC- 0844

SUBJECT: Secondary Mathematics

Faculty	Department / Section/Division
Humanities and Education	Education

INSTRUCTIONS TO CANDIDATES	Date: 2022/12/09
Total Marks = 100	Duration of the examination = 2 hours
	Candidates could be disqualified if you violate examination rules.
	Candidates are not allowed to communicate with and disturb fellow candidates during the examination.

INDEX NUMBER: .....

For Office use Only

Question No:	Section 01	Section 02	Section 03	Section 04			Total Marks	%	Signature
For Scrutinizer's Use Only (marks)									
For Moderator's Use Only (marks)									

SECTION 01

Question 01

Workout the following;

i. $\sqrt{6\frac{1}{4}}$ = _____

ii. $\sqrt[3]{-1000}$ = _____

(2 marks)

Question 02

Round off 74245 to the nearest 1000

= _____.

(1 mark)

Question 03

Give 0.0048 to 2 decimal places

= _____ (1 mark)

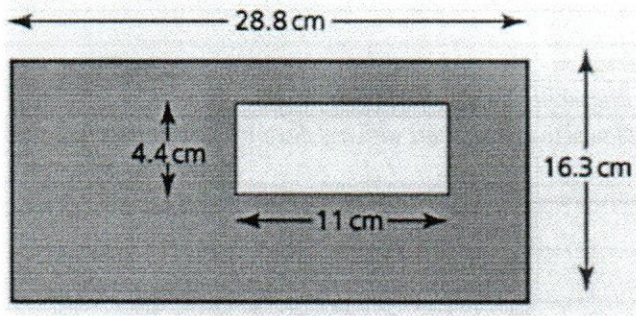
Question 04

Give your answer to the approximate value

610 ÷ 0.22 = _____ (1 mark)

Question 05

Estimate the area of the shaded part



= _____ (2 marks)

Question 06

Evaluate the answer;

i. 4 + 3 x 7 - 6 ÷ 3 = _____

ii. 3 x (-8 + -3) - 3 = _____

(2 marks)

Question 07

Write the following number in the standard form;

i. 0.00000008 = _____ (1 mark)

Question 08

Find the value of 'n'

$0.9^3 = 7.29 \times 10^n$

= _____ (1 mark)

Question 09

Write the answer in standard form

$(4.7 \times 10^6) - (8.2 \times 10^5)$

$= \_\_\_\_\_$

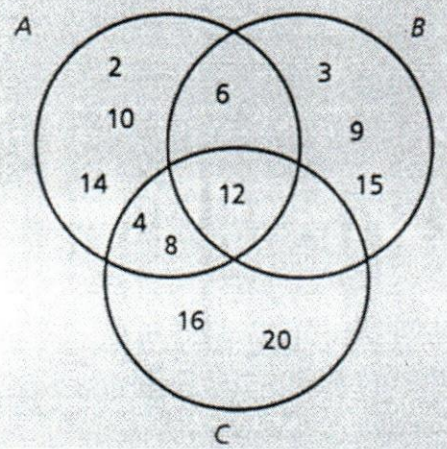
(1 mark)

Question 10

Copy and complete the following statements:

a $\mathscr{E} = \{...\}$ **b** $A' = \{...\}$ **c** $A \cap B = \{...\}$

d $A \cup B = \{...\}$ **e** $(A \cap B)' = \{...\}$ **f** $A \cap B' = \{...\}$



a) ----------

b) ----------

c) ----------

d) ----------

e) ----------

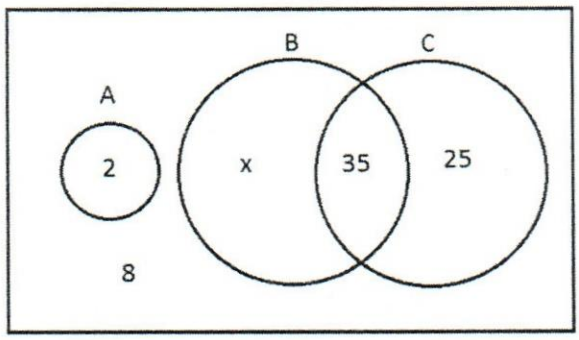
f) ----------

(6 marks)

SECTION 02

Question 11

The following Venn diagram represents the results of a survey with 100 students, where group A is students who study art and design, group B is students who study biology and group C is students who study chemistry:



Use this diagram to answer the following questions:

a. Calculate the value of x

_____

b. Describe in words the group with 25 members

_____

c. What fraction of those students who studied biology also studied chemistry? (in simplest form)

_____

d. How many students who studied biology also studied art and design?

_____

e. What percentage of students surveyed studied both biology and chemistry?

_____

f. What is the probability that one student selected at random from the survey will not have studied chemistry? (give your answer as a decimal)

_____

g. What is the ratio of students taking biology only to students taking biology? (in simplest form) _____ (7 marks)

Question 12

Simplify the following

$$\frac{(6x^2y^4)^2 \times (2xy)^3}{12xy^6y^8} \quad = \text{————————}$$

(1 mark)

Question 13

Expand and simplify the following;

i. $7m\,(m + 4) + m^2 + 2$ = ————————-

(1 mark)

Question 14

In the following question, make the letter in 't' the subject of the formula:

$3m - n = rt\,(p + q)$ = ————————-

(2 marks)

Question 15

Factorize the following by grouping:

i. $2a^2 + 2ab + b^2 + ab$ = ————————————

ii. $ab - 4cb + ac - 4c^2$ = ————————————

(2 marks)

Question 16

Factorize the following quadratic expressions:

$x^2 - 2x - 8$ = ————————————-

(1 mark)

Question 17

Solve the following linear equation

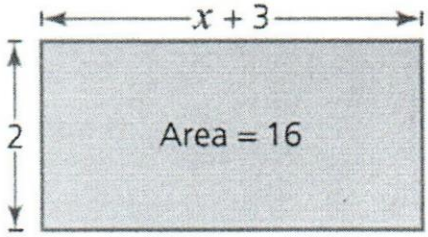
$$\frac{3(x-2)}{4} = 4x - 8$$

= ————————————

(1 mark)

Question 18

Construct an equation and solve it to find the value of x in the diagram



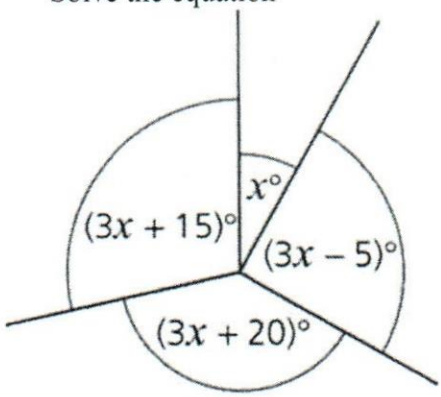
(1 mark)

Question 19

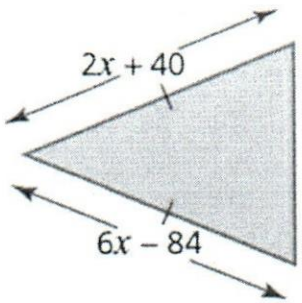
In questions a, and b ;

i. Construct an equation in terms of x
ii. Solve the equation

a.



b.



(2 marks)

Question 20

Solve the following simultaneous equation either by elimination or by substitution:

$X + y = 11$

$X - y - 1 = 0$

---.

(2 marks)

SECTION 03

Question 21

Plot a graph of the function $y = x^2 - 5x + 6$ for $0 \leq x \leq 5$

(please use a graph paper)

(5 marks)

Question 22

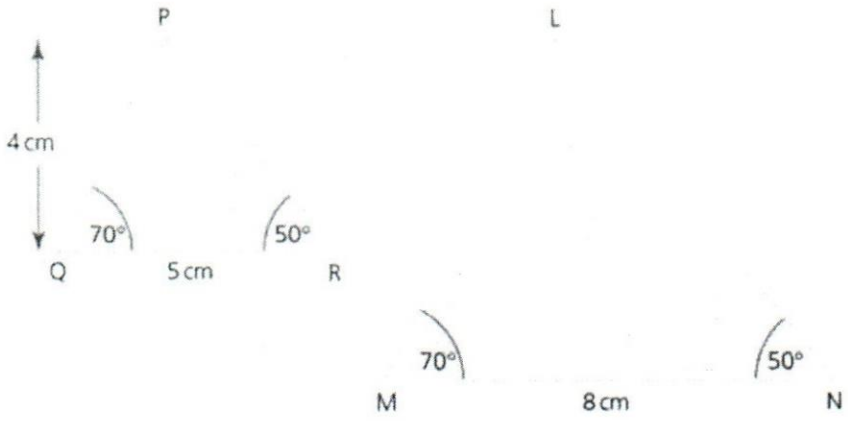
Using only a ruler and a pair of compasses, construct the following triangle.

△ ABC where AB=10cm AC=7cm and BC=9cm

(3 marks)

Question 23

The triangles PQR and LMN are similar



Calculate:

a the area of ΔPQR
b the scale factor of enlargement
c the area of ΔLMN.

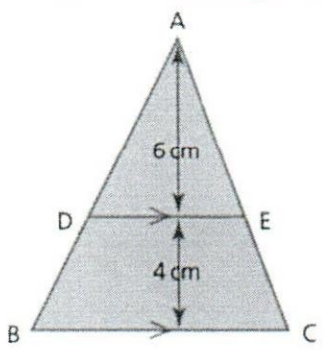
a) ---------
b) ---------
c) ---------

(3 marks)

Question 24

The triangle ADE shown has an area of $12\,cm^2$.

a Calculate the area of ΔABC.
b Calculate the length BC.

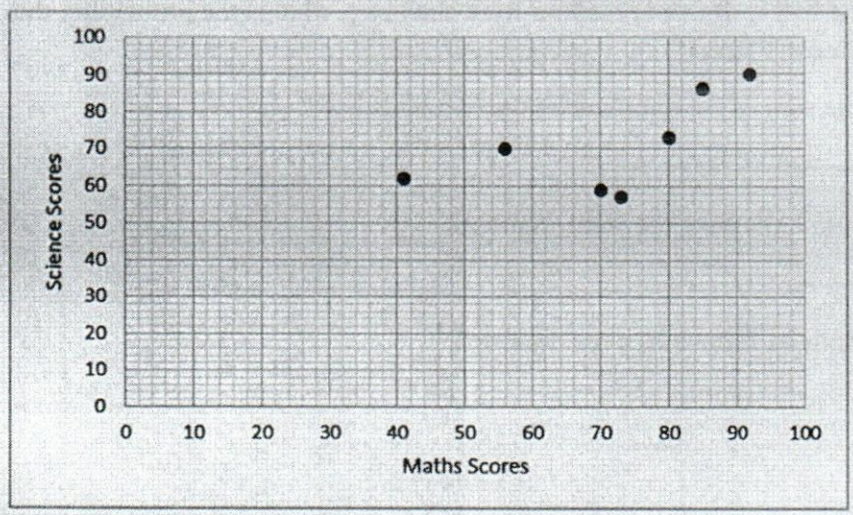


a)------ b)------

(2marks)

Question 25

The results of 7 students in both their maths and science tests (as percentages) are displayed in the following scatterplot:

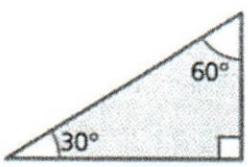


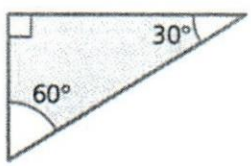
What score did the student who achieved 56% on their math test achieve in their science test?

_____ (1 mark)

Question 26

Explain, justifying your answer, whether the two triangles below are definitely congruent





_____.

_____. (2marks)

Question 27

One bag contains six balls numbered 1-6, while a second bag contains four balls numbered 1-4. If one ball is drawn at random from each bag, what is the probability that (give each as a fraction in simplest form):

a. The sum of the numbers on the two balls is 6?

_____

b. Both balls have the same number?

_____

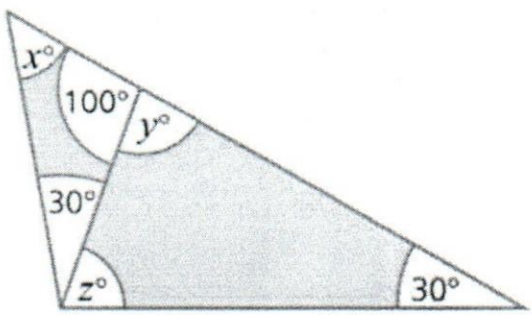
c. Both balls have an even number?

_____

(3 marks)

Question 28

In the diagram below, calculate the size of the labeled angles



_____

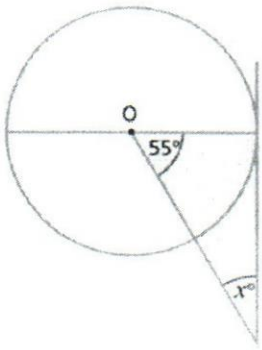
_____

(3 marks)

Question 29

In each of the following diagrams, O marks the center of the circle. Calculate the value of x in each case.

i.



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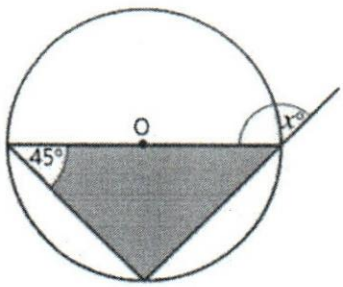
ii.



(2 marks)

Question 30

There are two Year 5 classes, 5A and 5B, and one student from each class is to be randomly selected to read at an assembly. Names for each class are placed into separate containers; there are 17 girls and 9 boys in class 5A, and 12 girls and 14 boys in class 5B. If a student from class 5A is selected, what is the chance that the student is a girl? Express your answer as a percentage rounded to two decimal places.

_____ (2 marks)

SECTION 04

Question 31

Here are the batting scores for 50 cricket players.

33	48	30	24	15	31	23	28	32	29
36	31	31	37	42	18	20	34	40	25
29	28	29	32	26	33	25	27	32	22
22	31	21	35	34	29	30	34	26	32
32	27	29	35	19	28	24	33	27	50

a Write the lowest score.

b Write the highest score.

c Design and complete a grouped frequency table for this data. Use classes of equal width.

d From your answer to part **c**, decide which class intervals contain the most data values.

(4 marks)

Question 32

The table shows renewable energies as a percentage of the total energy consumed for six European countries in 2014

Country	Biomass and renewable wastes	Hydropower	Geothermal	Wind	Solar
Belgium	5	0	0	0.7	0.5
Denmark	19.1	0	0	6.7	0.5
Austria	17.3	10.8	0.1	1	0.8
Portugal	12.8	6.1	0.9	4.7	0.6
Finland	25.7	3.3	0	0.3	0
UK	4.5	0.3	0	1.5	0.2

Source: Eurostat

i. Which country used the highest percentage of energy from wind?

_____

ii. List the three countries that used the greatest percentage of energy from biomass and renewable wastes, in order.

_____

iii. Make a summary table for these six countries to show the total percentage of energy consumed that came from renewable sources.

iv. Which country had the highest percentage consumption of renewable energy? Which had the lowest?

_____

(4 marks)

Question 33

In a survey, teachers of different subjects were asked how they preferred to travel to work. Some of the results are shown in this table.

	Car	Bus	Cycle	Walk	Other	Total
English		4	0	1	0	
PE	3	1	18		3	32
Geography	8		1	18		32
Maths	28	3	1		1	
Science	16	5	7	6		
Total		17		33	9	156

i. Complete the two-way table

ii. How many science teachers were involved in the survey?

_____

iii. In total, how many teachers traveled by car?

_____

iv. How many Maths teachers preferred to walk to school?

_____

(3 marks)

Question 34

The table shows the amount of money spent on Health, Education, Transport and Emergency services in the city of Suncastle.

Draw a pictogram to display this information.

Area of spending	Amount of money
Health	£57 000 000
Education	£62 000 000
Transport	£15 000 000
Emergency services	£34 000 000

(4 marks)

Question 35

The table shows the numbers of tents and caravans at a campsite on different days

Day	Friday	Saturday	Sunday	Monday	Tuesday
Number of tents	50	70	70	30	10
Number of caravans	60	100	90	80	40

Represent this data in a multiple bar chart. (5 marks)

Question 36

A dentist recorded the numbers of each type of treatment she carried out in a single week.

Treatment	Frequency
Check up	24
Filling	22
Clean/scale	10
Cap	4

Draw and label a pie chart to show this information

(2 marks)

Question 37

At Springbank High School, students can choose to study either French or Spanish. The tables give information about their GCSE results for one year.

French

GCSE result	Frequency
8 or 9	12
6 or 7	36
4 or 5	24
1, 2 or 3	9
Total	**81**

Spanish

GCSE result	Frequency
8 or 9	8
6 or 7	29
4 or 5	9
1, 2 or 3	3
Total	**49**

i. Which was the most popular language?

_____

ii. What grade was a student most likely to achieve in a language at GCSE?

_____

iii. Draw two comparative pie charts to show this information. (6 marks)

Question 38

Which of these are mutually exclusive events?

a. Getting a 2 and an odd number on a single roll of a dice
b. The next car you see is red and is three years old
c. The sun will shine and the temperature will be below freezing

_____

(2 marks)

Question 39

The four meals offered in a canteen are a salad, a roast, soup and pasta. Over a period of time it was found that out of every 10 customers:

Two chose a salad

Five shoes a roast

One chose soup

Two chose pasta

i. Write the probability that a customer chooses a salad, as a decimal

_____

ii. One 3 June, there were 50 customers. How many of the customers would you expect to choose a salad?

_____

iii. The actual number of customers who chose salad on 3 June was 20. Suggest a reason why this value doesn't match your answer to part ii.

_____. (3 marks)

Question 40

Shoppers in a supermarket are asked to taste two jams marked A and B and say which they prefer. The two-way table shows the preferences of male and female shoppers.

	Male	Female	Total
Jam A	10	13	23
Jam B	2	20	
Total	12		45

i. Complete the table

ii. Work out the probability that a shoppe chosen at random is:

a. A female who prefers jam B

_____

b. A male who prefers jam A

_____

c. A person who prefers jam A

_____

(3 marks)

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

CINEC CAMPUS
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FINAL EXAMINATION QUESTION PAPER

CODE - QP
Approved for Quality Management System

EDUCATION & TRAINING COURSE: DIPLOMA IN TEACHING
COURSE CODE: LC-0844
SUBJECT: SECONDARY SCIENCE

Faculty	Department / Section/Division
Humanities and Education	Education

INSTRUCTIONS TO CANDIDATES	Date: 09/12/ 2022
Total Marks = 100	Duration of the examination = 02 hours
Answer all the questions given	Candidates could be disqualified if you violate examination rules.
Underline the most suitable answer.	Candidates are not allowed to communicate with and disturb fellow candidates during the examination.

PART I

ANSWER ALL THE QUESTIONS GIVEN.

UNDERLINE THE MOST SUITABLE ANSWER.

(01). The teeth at the front of the mouth which are used for chopping are called:

(a) incisors, (b) canines, (c) premolars, (d) molars.

(02). When proteins are completely broken down the end products are:

(a) Glucose molecules, (b) glycerol molecules, (c) amino acids, (d) vitamins.

(03). what is a food chain?

a) A long chain made of food
b) Process of preparing food
c) Food where locked by chain
d) Pathway that energy and nutrients flow through the ecosystem

(04).Why do all food chains start with plants?

a) Because plants are easily grown
b) Because plants are nutritious
c) Because plants can produce its own energy
d) Because plants do not require energy

(05). Examples for fruits and seeds dispersed by wind

1. Hora, thotila, ranawara, wara, monerakudumbiya
2. Hora, thotila, gammalu, wara, monerakudumbiya
3. Hora, balsam, gammalu, rubber, monerakudumbiya
4. Water lily, thotila, gammalu, wara, mahagony

(06). When the diaphragm contracts (is pulled downward), _____ occurs.

1. inhalation 2. exhalation 3. a hiccup 4. the lungs deflate

(07). Gynaecium of a flower is,

1). Stamens, ovary and stigma
2). Stamens, pollen and ovary
3). Ovary, stigma and pollen sac
4). Ovary, style and stigma

(08). What is the excretory system in charge of?

1). Breaking down food so it can be used by the body.
2). Giving the body support and strength
3). Removing wastes and excess fluid from the body
4). Wastes and excess fluid from the body

(09). Which acid is secreted by the cells of the gastric glands in the stomach?

1). hydrochloric acid
2). nitric acid
3). hydroiodic acid
4). sulphuric acid

(10). Excess glucose in the human body are stored as _____ in the liver.

1). glycerol
2). glycerine
3). glycogen
4). glucose

(11). The ascent of sap in plants takes place due to _____.

1).root pressure 2). Transpiration pull

3). both a and b 4).osmosis

(12). The movements that propel the food particles through the digestive tract are called,

1). peristalsis 2) .rhythm 3). Mastication 4). Hydrolysis

(13). Digestion takes place in a long tube-like canal called the alimentary canal, or the digestive tract. Food travels through these organs in the following order:

1. Mouth, gullet, stomach, small intestine,large intestine and rectum

2. Mouth, oesophagus, stomach, large intestine,small intestine and rectum

3. Mouth, stomach, oesophagus, small intestine,large intestine and rectum

4. Mouth, stomach, gullet, small intestine,large intestine and rectum

(14). Why does blood turn dark red as it circulates through the body?

1. It starts to clot.
2. It gets old and dirty flowing through the body.
3. The oxygen in it is replaced with carbon dioxide.
4. The farther blood is from the heart, the more dark red it is.

(15). A structure that could be seen in plant cell, but not in an animal cell is

1).mitochondria 2) cell wall

3).cytoplasm 4) plasma membrane

(16). What is used as a solvent to dissolve chlorophyll from a leaf.

1 . Methylated spirit 2.iodine 3. Alcohol 4.boiled water.

(17). which is the most accurate statement?

The principal role of a flower in the life cycle of a plant is.....

1. Attracting insects 2. Producing seeds
3. Producing pollen 4. Producing nectar

(18). which acid is secreted by the cells of the gastric glands in the stomach?

1). hydrochloric acid
2). nitric acid
3). hydroiodic acid
4). sulphuric acid

(19). The liquid portion of the blood is called _____.

1). water 2). Plasma 3). Serum 4). Serum

(20).Which is the largest gland in the human body?

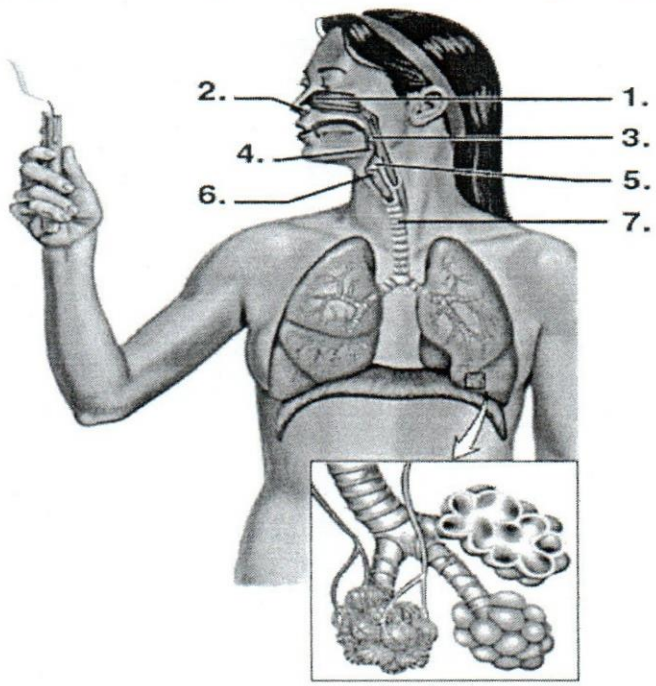
1`.Thyroid 2. Liver 3. Pancreas 4. None of these

(20 marks)

PART II

*** Answer any FOUR (04) questions given. Each question carries equal marks.**

(01). Human respiratory system is an important system in regulating most of the functions.



i. Name the parts from 1 to 7 of the above figure.
ii. Name the functions of respiratory system.
iii. Indicate the path of oxygen which enter from nostrils and travel to lungs.
iv. Briefly explain the inspiration and expiration.
v. What are the changes happen to air enters to the nostrils. **(20 marks)**

02). i. Draw two food chains?

ii. Draw a food web?

iii. Who are autotrophies? What is their position in food chains?

iv. Name three herbivorous animals?

v. Who are omnivorous animals? Name three omnivorous animals? **(20 marks)**

03). i. What is Environment pollution?

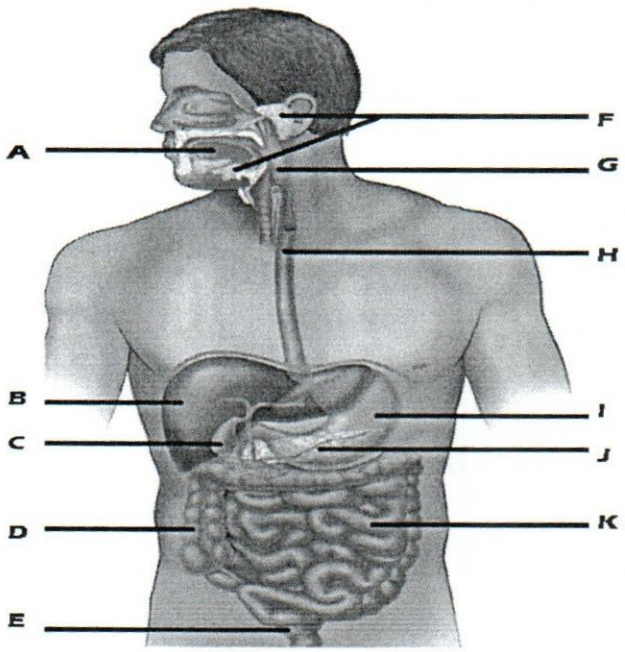
ii. What are the three main categories of environment pollution?

iii. List five main ways of air pollution?

iv. Write five ways of water pollution?

v. What is global warming? What are the bad effects of global warming? **(20 marks)**

(04). Digestive system is one of the most important systems of the body.
i. Label the parts from A-L of the following figure.



ii. Name two hormones secreted by the organ J.

iii. What is the main function of the organ K?

iv. What are the adaptations of K to do its functions?

v. Write the functions of the two hormones mentioned in above II **(20 Marks)**

(05) i. Prepare a dichotomous key to group the following animals.

Elephant, frog, fish, parrot, bee, snake, crocodile, earth worm, butterfly, bee, man, dog

ii. What are the features of mammals?

iii. List five characteristics of Arthropods?

iv. Who are warm blooded animals? Give two examples?

v. What are the main two categories the animals are divided?

(20 marks)

(06).i. What are the characteristics of living beings?

ii. Write ten uses of water?

iii. Write ten ways how water gets polluted.

iv. What are the main nutrients of the food?

v. What are the two groups vitamins? Give examples.

(20 marks)

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

CINEC CAMPUS
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FINAL EXAMINATION QUESTION PAPER

CODE - QP
Approved for Quality Management System

EDUCATION & TRAINING COURSE: DIPLOMA IN TEACHING MATHEMATICS AND SCIENCE COURSE CODE: LC - 0844
SUBJECT: METHODS OF TEACHING MATHEMATICS

Faculty	Department / Section/Division
Humanities and Education	Education

INSTRUCTIONS TO CANDIDATES	Date: 2022.08.21
Total Marks = 100	Duration of the examination = 02 hours
	Candidates could be disqualified if you violate examination rules.
	Candidates are not allowed to communicate with and disturb fellow candidates during the examination.

- **Part I and Part II** -Answer **ALL** questions.
- **Part III** – Answer **One (01)** question only.

Part I - (2 X 10 = 20 marks)

Choose the correct answer.

1. "Mathematics has two faces. One face is a systematic deductive science. The second face of mathematics is in the making it appears as an experimental, inductive science- G.Polya ".The best aspect of mathematics that describes by this statement is,
    a) Mathematics as the chief language of science
    b) Mathematics as the science of patterns and relationships
    c) Mathematics as a system of logical processes
    d) Abstract nature of mathematics
2. In Euclidean geometry a point is defined as "A Point is that which has no Parts". This implies that,
    a) Mathematics has a unique language of communicating concepts.
    b) Mathematics has an abstract nature.

c) mathematics is a system of logic processes in which conclusions are deduced from certain fundamental assumptions and definitions.

d) Mathematical concepts are concrete.

3. What is the incorrect statement about objectives?

a) Objectives are specific and realistic.

b) Objectives are specific and measurable.

c) Objectives are broad and achievable.

d) Objectives are specific and achievable.

4. A cultural aim in teaching mathematics is;

a) To provide the basis of mathematical skills and processes which will be needed for vocational purposes.

b) To help the learner in the intelligent use of reasoning power.

c) To help the student explore creative fields such as art and architecture.

d) To help the learner appreciate how mathematics contributes to his understanding of natural phenomena.

5) "Mathematics gives form shape and definiteness to the properties of matter" This statement describes the correlation between Mathematics and

a) Biology

b) Chemistry

c) Engineering

d) Physical Sciences

6) Which statement is correct about "child -centered teaching"?

a) Child is passive

b) Teacher is active

c) Includes lecture method

d) Includes project method

7) The correct order of steps in the project method is,

a) Planning, executing, creating, evaluating

b) Planning, Creating, executing, evaluating

c) Creating, executing, planning, evaluating

d) Creating, planning, executing, evaluating

8) The acceptable range of the test facility index for a test is,

a) Less than 30%

b) Greater than 70%

c) Between 30% and 70%

d) Less than 30% and greater than 70%

9) According to Jean Piaget's studies; the children in the age category 7 to 11 years is called as,

a) Sensory-motor stage

b) Pre-operational stage

c) Concrete operational stage

d) Formal operational stage

10) The incorrect statement about "Zone of Proximal Development" is;

a) It is a concept found by Vygotsky.

b) It is the zone in which the students can perform efficiently with teacher's support.

c) It is the zone in which the students cannot perform the task even with the help of the teacher.

d) It is the zone that the efficient learning occurs.

Part II - (5 X 10 = 50 marks)

01. Write two (02) "Knowledge and Understanding Objectives" of teaching Mathematics.
02. Briefly describe how do Mathematics and Geography correlate?
03. Write five (05) characteristics of a mathematical problem.
04. Write three (03) methods that can be used in teacher-centered method of teaching mathematics.
05. Write the four (04) differences between the inductive method and deductive method of teaching mathematics.
06. Explain briefly how the digital tools can be used in the classroom to improve learning.
07. Write three (03) barriers to use technology in teaching mathematics.
08. Write three (03) practical uses of an achievement test?
09. Write three (03) differences between assessment and evaluation.
10. What are the three (03) stages of J. Bruner's cognitive development.

Part III - (30 marks)

01. i. What is meant by "Inductive Method" and "Deductive Method in teaching mathematics? Explain clearly. (10)

ii. Elaborate the method of deductive reasoning using any topic in **geometry**. (10)

iii. Explain how can you use the method of inductive reasoning using the **same** example you used for part (iii). (10)

02. i. What are the four (04) processes of Jean Piaget's cognitive approach? (05)

ii. Clearly explain the four process you mentioned in part (i) using any topic in **algebra.** (20)

iii. Explain how does J. Bruner's view differs from Jean Piaget's view in cognitive approach. (05)

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

CINEC CAMPUS
Beyond A Graduate

FINAL EXAMINATION QUESTION PAPER

CODE - QP
Approved for Quality Management System

EDUCATION & TRAINING COURSE: DIPLOMA IN TEACHING MATHEMATICS & SCIENCE
COURSE CODE: LC – 0844
SUBJECT: SCIENCE TEACHING METHODOLOGY

Faculty	Department / Section/Division
Humanities and Education	Education

INSTRUCTIONS TO CANDIDATES	Date: 2022.08.14
Answer all five questions.	Duration of the examination = 02 hours
Total Marks = 100	Candidates could be disqualified if you violate examination rules.
	Candidates are not allowed to communicate with and disturb fellow candidates during the examination.

PART- I.
ANSWER ALL THE QUESTIONS IN PART- I.

(01). In 5E method in teaching, last step is,

(a). Explore
(b). Evaluation
(c). Engage
(d). Elaboration

(02). In 5E method in teaching, elaboration part is done by,

(a). Students
(b). Teacher
(c). Teacher and students
(d). Elaboration is not done

(03). The goal of teaching is

(a) to give information
(b) to involve pupils in activities
(c) to impart knowledge
(d) desirable change in behavior

(04). Select the correct fact of being ready for class.
(a). show confidence in your teaching
(b). Few rules are more effective.
(c). don't use sarcasm on students
(d). applause the student's effort, and manners.

(05). To go beyond the given information is
(a) Unistructural level
(b) Multi structural level
(c) Rational level
(d) Extended abstract level

(06). Students are passive in
(a) Project method
(b) Discovery method
(c) Lecture method
(d) Inquiry method

(07).. Symposium is a type of
(a) Discovery method
(b) Discussion method
(c) Lecture method
(d) Demonstration method

(08). Activities involves
(a) Physical action
(b) Mental action
(c) Social action
(d) Physical and mental action

(09) . In 5E method in teaching is considered as,

(a). One-way method
(b). Transition method
(c). Transaction method
(d). Transformation method

(10). Which is not true about projects
(a) It is a purposeful activity
(b) It is proceeded in social environment
(c)It is accomplished in real life
(d) It is teacher centered activity

(11). Duration of lessons in macro- lesson plans is
(a) 5-10 min
(b) 10-20 min
(c) 20-30 min
(d) 35-45 min

(12). Which is not true about lesson plan
(a) It is develops confidence
(b) It helps in orderly delivery of contents
(c) It is developed by students
(d) It saves from haphazard teaching

(13). Most important part of a lesson plan is
(a). Materials use
(b). Home work
(c). Objective
(d). Content of the lesson

(14). Present day classroom use
(a). Teacher centered method
(b). Lecture method
(c). Child centered method
(d). Transmission method

(15). Assessment of a lesson is done
(a). At the beginning of a class
(b). At the middle of the class
(c). Throughout the lesson
(d). End of the lesson

(16). In teaching, experienced members guide the immature one's for
(a) Spending time
(b) Qualification
(c) Quality of life
(d) Adjustment of life

(17). Which is not the focal point of triangular process of teaching
(a) Teaching method
(b) Teacher
(c) Pupil
(d) Contents

(18). Practice is made in

(a) Inductive method
(b) Deductive method
(c) Drill method
(d) Discussion method

(19). A Student-centered Classroom,

(a). One-way method
(b). Only teachers speak
(c). Lots of group activities are there
(d). Elaboration is not done

(20) . Evaluation in the classroom helps teacher

(a). Cover the syllabus
(b). Spent the time
(c). Explain the content of the lesson
(d). To asses whether the teacher met the objective.

(Marks. 1 X 20 = 20)

Part II

Answer any four questions given below.

(01).

i. Write ten qualities of an effective teacher.

ii. Explain the disadvantages of a teacher centered classroom. **(20 marks)**

(02).

i. Prepare a lesson plan for a science lesson for any topic you like.

ii. Explain the benefits of a lesson plan for a teacher. **(20 Marks)**

(03).

i. Activity based/ competency-based teaching is effective in today's class room. Explain this by giving suitable examples.

ii. What are the benefits of group activities? **(20 Marks)**

(04).

i. List the advantages of having a proper lesson plan.

ii. Briefly explain the steps types of distractions a teacher face in a classroom. **(20 Marks)**

(05).

i. Briefly explain the steps of 5E teaching methodology.

ii. Why teaching materials/ teaching aids are important in classroom teaching? Explain. **(20 Marks)**

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COURSE CODE: LC-0844
SUBJECT: SCIENCE TEACHING METHODOLOGY

Faculty	Department / Section/Division
Humanities and Education	Education

INSTRUCTIONS TO CANDIDATES	Date: 2022.12.11
Total Marks = 100	Duration of the examination = 2 hours
	Candidates could be disqualified if you violate examination rules.
	Candidates are not allowed to communicate with and disturb fellow candidates during the examination.

Answer ALL questions

Question 01

Effective Teaching occurs where the learning experience structured by the teacher matches the needs of the learner. Explain citing examples, how each component given below impacts for a science teacher to conduct an effective teaching environment.

a. Professional Judgement
b. Subject Knowledge
c. Professional Knowledge

(30 Marks)

Question 02

Science can be defined, "as a systematic attempt to discover, by means of observation and reasoning, particular facts about the world, and to establish laws connecting facts with one another and, in some cases, to make it possible to predict future occurrences".

a. State four main objectives in learning science and briefly explain each.

(20 arks)

b. Explain how you, as a science teacher, could use integrated approach of organizing the science curriculum in the secondary classroom to conduct an effective science lesson (characteristics, merits and limitations of this approach and real class room example need to be mentioned in your answer).

(30 marks)

Question 03

Write short notes on the following concepts in science.

1. Scientific Thinking
2. Scientific Knowledge
3. Science Process Skills
4. Scientific Attitude

(20 Marks)

Total Marks - 100

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