HOLIDAY ASSIGNMENT
SS3

MATHEMATICS

A point H is 20m away from the foot of a tower on the same horizontal ground. From the point H, the angle of elevation of the point (P) on the tower and the top (T) of the tower are 30^0 and 50^0 respectively. Calculate, correct to 3 significant figures:

a. /PT/;

b. the distance between H and the top of the tower;

c. the position of H from the foot of the tower if the angle of depression of H from the top of the tower is to be 45^0.

ENGLISH LANGUAGE

GRAMMAR

The Bedrock, Pages 379-380,
Questions I – XX

COMPREHENSION

NOSEC, Book 3, Page 303,
Passage A, Questions 80-91

SUMMARY

NOSEC, Book 3, Page 292, Questions 1 and 2

SPEECH

NOSEC, Book 3, Pages 293-294,
Questions 1-20

CIVIC EDUCATION

1a. Define the term popular participation

b. Discuss any **FOUR (4)** factors that favour popular participation

2a. Discuss any **FOUR (4)** need for popular participation

b. Mention the **TWO (2)** major modes of popular participation

ECONOMICS

1a. Distinguish between *Economics growth* and *Economics Development.*

b. Enumerate the **problems** facing development planners in Nigeria.

2a. Define ***renewable natural resources***.

b. With specific examples, explain any **three** benefits of renewable natural resources to an economy.

BIOLOGY

1a. State any four organs used for the maintenance of constant internal environment in animals.

b. Briefly explain any three diseases of kidney.

2a. What is an hormone

b. In a tabular form, state the location and one hormone produced by the following endocrine gland:
   i. Adrenal gland
   ii. Testis
   iii. Pancrease
   iv. Pituitary gland

COMPUTER STUDIES

1a Define Information and Communication Technology (ICT).

b Discuss five applications of ICT in education, health, and banking sectors.

2 ai Computer Virus

ii Firewall

iii Phishing

b Discuss three methods of protecting computer systems from malware attacks.

ANIMAL HUSBANDRY

1a Define Animal improvement.
b Explain the following briefly:
(i) selection method
(ii) breeding method
(iii) hybridization.

2a Define diseases.
b Explain briefly four factors that can predispose farm animals to diseases.

DATA PROCESSING

1. Database Management Systems (DBMS):
a Define a database and explain its importance in data management.
b Differentiate between a primary key and a foreign key in a relational database.

2. Spreadsheet Applications:
a Define a spreadsheet and list five common uses of spreadsheet software.
b Explain the functions of the following spreadsheet features:
i) Cell referencing
ii) Functions (e.g., SUM, AVERAGE)
iii) Charts and graphs

DYE AND BLEACHING

1a. What is the difference between natural and synthetic dye's?
b. Describe the process of dying fabric using the immersion method.

2a. What is the purpose of bleaching in textile processing?
b. Describe the different types of bleaching agents.

FURNITURE MAKING

1a. Make a neat freehand isometric sketch of a dining chair.

b. Name three major processes that are involved in the production of the dining chair about.

2. Mention two types of joints that can be used in the above construction.

FURTHER MATHEMATICS

1. Differentiate the following with respect to x

i.

$$y = \frac{(2x+1)^3}{(x^3-4)^2}$$

ii. $y = (2x-1)^3(x^2+5)^2$

iii. $y = 3x^2 + 2x - 1$

2 a. After t seconds, a particle has traveled a distance of s metres, where $s = 27t + 15t^2 - t^3$. Find;

i. its velocity after 6 seconds

ii. acceleration after 6 seconds

b. Find the gradient of $y = 5 - 3x^2$ at $x = 2$

PHYSICS

1a. Define electric potential

b. Explain zeroth law

2a. Define binding energy

b. Explain terminal velocity

CHEMISTRY

1a. State Faraday's first law of electrolysis.

b. Mention two factors that influence the preferential discharge of ions during electrolysis.

2 Consider the following redox reaction:

$X(s) + Y2+(aq) \rightarrow X2+(aq) + Y(s)$

a. Which of X and Y is the more electropositive?

b. Give the change in oxidation number of the less electropositive species.

GEOGRAPHY

1a. Define climate change.

b. State and explain the causes of climate change.

2a. State the meaning and composition of Ecowas.

b. State five(5) aims and objectives of Ecowas.

AGRICULTURAL SCIENCE

1a Define Crop improvement.

b Highlight eight aims of crop improvement.

2a Explain briefly agricultural extension.

b Mention six functions of an agricultural extension agent.

TECHNICAL DRAWING

Question 1

Figure 5 shows the orthographic view of a casting in third angle projection.

Draw full size, the isometric view of the casting making X the lowest point

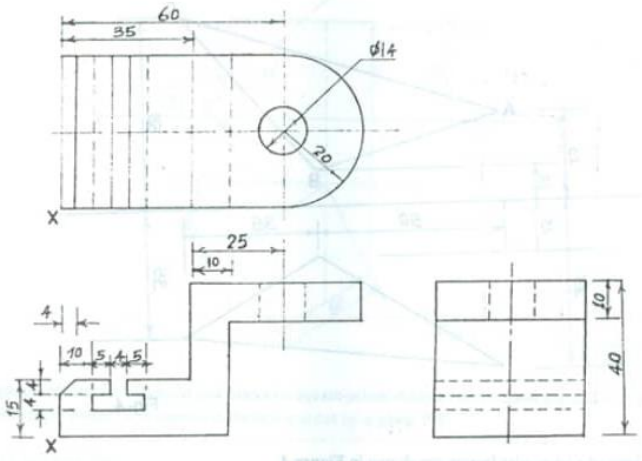
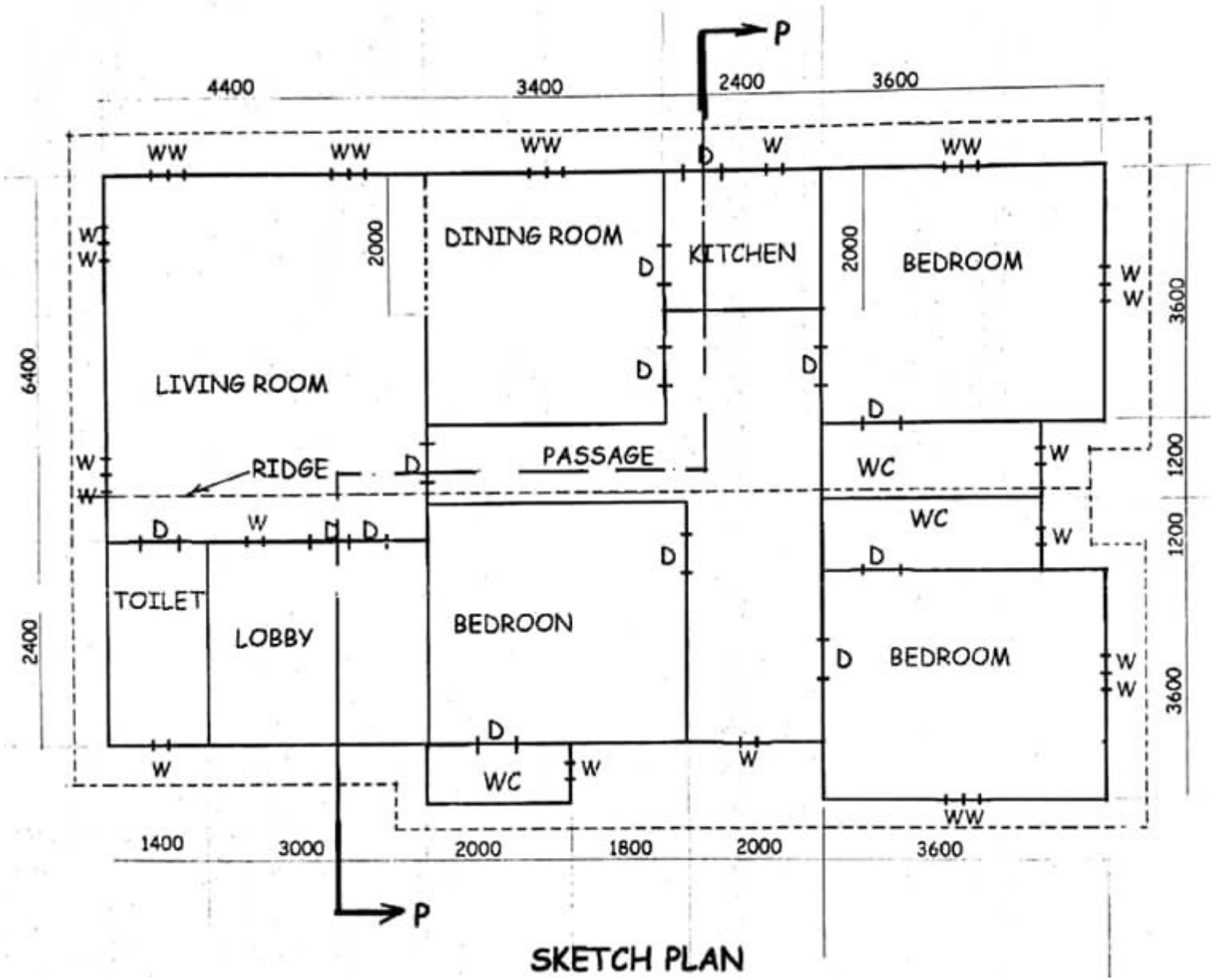


Fig-5

Question 2


P
4400
3400
2400
3600
WW
WW
WW
D
W
WW
W
W
2000
DINING ROOM
KITCHEN
2000
BEDROOM
W
W
3600
6400
D
D
D
LIVING ROOM
D
W
W
RIDGE
D
PASSAGE
WC
W
1200
WC
W
1200
D
W
D
D
D
TOILET
LOBBY
BEDROON
D
BEDROOM
W
W
2400
3600
D
W
WC
W
W
WW
1400
3000
2000
1800
2000
3600
P

SKETCH PLAN

SPECIFICATIONS

All *dimensions are given in millimetres.*

FOUDATION: 675225 concrete strip at depth 1000 below the ground level

FLOOR: 200 hardcore;
150 thick concrete;
25cement sand screed.

WALLS: All walls 225 with 12 mortar rendering on both sides.

LINTEL: 225 225 reinforced concrete.

BEAM: 225 225 reinforced concrete 2400 abovefinishedfloor level.

COLUMN: 225 225 reinforced concrete.

DOORS: All doors flushed wooden;
D –2100 900 38 in 100 50 timber frame.

WINDOWS: W – 600 600 38;
All windows are sliding glazed sash in aluminium frames.

ROOF: Pitched gable at 30o slope with 13 corrugated asbestos sheet;
Rafter – 100 5 0 at 1000 centres;
Fascia board – 24 250;
Purlin – 100 50 1000 centres;
King post and strus – 100 50
Wall Plate – 100 75;
Tie beam – 100 50;
Ceiling Joist – 50 50 at 1200 centres;
Floor-to-ceiling height – 3100.

(a) Draw, to a scale of 1:100, the:

(i) floor plan;

(i) floor plan;
(ii) front elevation.

(b) Draw, to a scale of 1:50, the detailed view of the section on plane **Y–Y**.

[Assume suitable dimension(s) where unspecified/necessary]