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BUGESERA DISTRICT

**TSS 2nd TERM DISTRICT COMPREHENSIVE ASSESSMENT
SCHOOL YEAR: 2024-2025**

SECTOR: CONSTRUCTION AND BUILDING SERVICES

TRADE: BUILDING CONSTRUCTION

RQF LEVEL: LEVEL 3

MODULE CODE AND TITLE: BDCBS 301 BUILDING SET OUT

DURATION: 3hours

DATE: / / 2025

.../100
MARKS

INSTRUCTIONS TO CANDIDATE:

- ✓ This exam has three sections.
- ✓ Maximum marks...../ 100 Marks
- ✓ Attempt all Questions in A
- ✓ Choose only three questions in section B.
- ✓ Choose only one question in section C.
- ✓ Use pencil to draw any sketch mandatory
- ✓ Draw a line after answer the question

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SECTION A Attempt all Question**(55marks)**

Q1. Match each site clearing technique (Column A) with the appropriate description or purpose(ColumnB). **(5marks)**

Column A: Techniques	Column B: Descriptions
1.Selective Clearing	A. Uses heavy machinery like bulldozers, leading to complete land clearance
2.Reforestation	B.A method that removes only specific trees or vegetation to minimize ecological impact.
3.Mechanical Clearing.	C. Maintaining untouched strips of land around water bodies to prevent contamination and preserve habitat.
4.Manual Clearing	D. A labor-intensive method involving hand tools for minimal environmental disturbance.
5.Buffer Zone Preservation	E.A post-clearing strategy that restores native vegetation and ecosystems.

Q2. If you are assigned to clear a site with dense vegetation and rocky terrain, which tools would you select. **(3marks)**

Q3. Which of the following is NOT a reference point that ensures precise construction demarcation of a building? Baselines, Benchmarks, Walls, Gridlines, Pegs **(2marks)**

Q4. Answer by true or false

(4marks)

- a. Site grading is an essential part of leveling the ground for construction as it ensures proper drainage.
- b. Theodolites are used for accurate levelling off the ground during building set out.
- c. An auto level is considered more accurate than a spirit level for large-scale ground leveling.
- d. A benchmark is used only to measure horizontal alignment, not for elevation during ground leveling.
- e. Is it unnecessary to use multiple reference points (benchmarks) when leveling the ground for a building set out?

Q5. What are the different adequate materials selected according to the standard for construction purposes, particularly in building set out?

(4marks)

Q6. Define the term “Grading in building set out”

(2marks)

Q7. Choose the letter corresponding to the correct answer in each statement
(5marks)

1. In a site plan, what does a compass symbol indicate?

- a. The scale of the drawing
- b. The wind direction
- c. The orientation of the site (North direction)
- d. The height of the structure

2. Which of the following symbols represents a window in architectural drawings?

- a. A straight line with a break in the middle
- b. A square with an “X” inside
- c. A thick solid rectangle
- d. A double line with a gap in between

3. In a floor plan, what does a thick solid line typically represent?

- a. A dimension line
- b. A hidden object
- c. A structural wall
- d. A glass partition

4.What symbol is commonly used to represent an electrical outlet in building drawings?

- a. A circle with two parallel lines
- b. A square with an "X" inside
- c. A triangle with a dot inside
- d. A rectangle with diagonal lines

5.What does the abbreviation “CL” stand for in construction drawings?

- a. Ceiling Level
- b. Center Line
- c. Concrete Layer
- d. Column Layout

Q8. Give any three (3) parts of GPS (Global Positioning System) (3marks)

Q9. A surveyor takes staff readings at equal intervals along a road. If the first reading is 1.50 m, and subsequent readings increase by 0.25 m each, what will be the reading at the 5th point? (3marks)

Q10. Define the following term: (3marks)

- a. Plane of collimation:
- b. Height of collimation:
- c. Datum:

Q11. Mention any (4) four key functions of GPS in building set-out (construction layout) (4marks)

Q12. Identify any four (4) important reasons to remove topsoil in building set-out (4marks)

Q13.Name the following figure with the correct title below: bulldozer, Mechanical auger, Tipper truck, Back actor, Pneumatic drill, Mechanical shovel. **(4marks)**



a).....



b).....



c).....



D).....

Q14.Explain the term “setting out of building” **(2marks)**

Q15. Arrange the following actions in the correct order for evaluating environmental hazards during the site investigation process: **(3marks)**

Seek advice from specialists → Evaluate solutions→ Recognize risks

Q16. Evaluate the most suitable method for setting out a right-angle building in a large-scale construction project where high precision is required. **(2marks)**

Q17. Explain the importance of properly maintaining and storing Personal Protective Equipment (PPE) in a construction environment **(2marks)**

SECTION B Choose only three question

(30marks)

Q18. Hand tools and power tools play distinct roles in the setting out process of a construction site. Differentiate between hand tools and power tools according to the following factor: **(10marks)**

- a. Speed:
- b. Precision:
- c. Ease of use:
- d. Suitability:
- e. Power requirement:

Q19. When assessing site conditions, several key elements must be evaluated to ensure the site is suitable for its intended use. State ten (10) essential factors considered during a site condition assessment. **(10marks)**

Q20. Describe the process of marking the dimensions of trenches using building lines. What tools are typically used to achieve this? **(10marks)**

Q21. When setting out a building and marking demarcation dimensions for trenches, foundation, and walls, which the quality checkpoints are essential to ensure accuracy, stability, and compliance with design specifications? **(10marks)**

Q22. After defining dumpy level, discuss steps for temporary adjustment dumpy level. **(10marks)**

SECTION C Choose only one questions

(15marks)

Q23. Define “theodolite” and fill the parts of the following figure:

(15marks)



Q24.the following consecutive reading were taken with a dumpy level and a 4m levelling staff on a continuous sloping ground at 30m interval.

0.585 on A, 0.936, 1.953, 2.846, 3.644, 3.938, 0.962, 1.035, 1.689, 2.534, 3.844, 0.956, 1.579, 3.016 on B. the instrument was shifted after sixth (6th) and twelve readings. The elevation of A is 520.450m. calculate the R. L of each station by height of instrument method. Apply usual arithmetic checks.

[illegible]