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Senior Secondary School Examination Term–II, 2022

MARKING SCHEME

SUBJECT – **ENGINEERING GRAPHICS**
SUBJECT CODE – **046**
PAPER CODE – **68**

General Instructions :

1. You are aware that evaluation is the most important process in the actual and correct assessment of the candidates. A small mistake in evaluation may lead to serious problems which may affect the future of the candidates, education system and teaching profession. To avoid mistakes, it is requested that before starting evaluation, you must read and understand the spot evaluation guidelines carefully**. Evaluation is a timed mission for all of us. Hence, it is necessary that you put in your best efforts in this process**.

2. ''**Evaluation policy is a confidential policy as it is related to the confidentiality of the examinations conducted, evaluation done and several other aspects. Its leakage to public in any manner could lead to derailment of the examination system and affect the life and future of millions of candidates. Sharing this policy/document to anyone, publishing in any magazine and printing in Newspaper/ Website, etc. may invite action under IPC.**''

3. Evaluation is to be done as per instructions provided in the Marking Scheme. It should not be done according to one's own interpretation or any other consideration. Marking Scheme should be strictly adhered to and religiously followed. **However, while evaluating, answers which are based on latest information or knowledge and/or are innovative, they may be assessed for their correctness otherwise and marks be awarded to them**.

4. The Head-Examiner must go through the first five answer books evaluated by each evaluator on the first day, to ensure that evaluation has been carried out as per the instructions given in the Marking Scheme. The remaining answer books meant for evaluation shall be given only after ensuring that there is no significant variation in the marking of individual evaluators.

5. If a question has parts, please award marks on the right-hand side for each part. Marks awarded for different parts of the question should then be totalled up and written in the left-hand margin and encircled.

6. Evaluators will mark (✓) wherever answer is correct. For wrong answer (X) be marked. Evaluators will not put right kind of mark while evaluating which gives an impression that answer is correct and no marks are awarded. **This is most common mistake which evaluators are committing**.

7. If a question does not have any parts, marks must be awarded in the left-hand margin and encircled. This may also be followed strictly.

8. If a student has attempted an extra question, answer of the question deserving more marks should be retained and the other answer scored out.

9. **No marks to be deducted for the cumulative effect of an error. It should be penalized only once.**

10. A full scale of marks 0–35 has to be used. Please do not hesitate to award full marks if the answer deserves it.

11. Every examiner has to necessarily do evaluation work for full working hours i.e., 8 hours every day and evaluate 30 answer books per day in main subjects and 35 answer books per day in other subjects (Details are given in Spot Guidelines). This is in the view of the reduced syllabus and number of questions in question paper.

12. Ensure that you do not make the following common types of errors committed by the Examiner in the past:
    - Leaving answer or part thereof unassessed in an answer book.
    - Giving more marks for an answer than assigned to it.
    - Wrong totalling of marks awarded on a reply.
    - Wrong transfer of marks from the inside pages of the answer book to the title page.
    - Wrong question wise totalling on the title page.
    - Wrong totalling of marks of the two columns on the title page.
    - Wrong grand total.
    - Marks in words and figures not tallying.
    - Wrong transfer of marks from the answer book to online award list.
    - Answers marked as correct, but marks not awarded. (Ensure that the right tick mark is correctly and clearly indicated. It should not merely be a line. Same is with the 'X' for incorrect answer).
    - Half or a part of answer marked correct and the rest as wrong, but no marks awarded.

13. While evaluating the answer books if the answer is found to be totally incorrect, it should be marked as (X) and awarded zero (0) Marks.

14. Any unassessed portion, non-carrying over of marks to the title page, or totalling error detected by the candidates shall damage the prestige of all the personnel

engaged in the evaluation work as also of the Board. Hence, in order to uphold the prestige of all concerned, it is again reiterated that the instructions be followed meticulously and judiciously.

15. The examiners should acquaint themselves with the guidelines given in the guidelines for spot evaluation before starting the actual evaluation.

16. Every examiner shall also ensure that all the answers are evaluated, marks carried over to the title page, correctly totalled and written in figures and words.

17. The Board permits candidates to obtain photocopy of the Answer Book on request in an RTI application and also separately as a part of the re-evaluation process on payment of the processing charges.

Instructions: -

(i) The marking scheme carries only suggested value points for the answers.

(ii) These are only Guidelines and do not constitute the complete answer.

(iii) The students can have their own expression and if the expression is correct, the marks be awarded accordingly.

(iv) The candidates would be permitted to obtain a photocopy of the Answer Book on request on payment of the prescribed processing fee. All Evaluators /Additional Head Examiners/ Head Examiners are once again reminded that they must ensure that evaluation is carried out as per value points for each answer as given in the Marking Scheme.

(v) All the Head Examiners/Additional Head Examiners /Evaluators are instructed that while evaluating the answer books if the answer is found to be totally incorrect, (X) should be marked on the incorrect answer and awarded '0' Marks.

General Note **:**

a) Marks are to be awarded in proportion to the work done.

b) Mistakes in dimensioning up to ±1.0 mm are to be ignored.

c) In dimensioning, arrow heads of various types, as per SP: 46-2003 codes are usable. However, where space is too small for an arrowhead, oblique stroke or dot may be employed.

d) In sectioned view of question no.2, if hidden edges / lines are drawn, no marks should be deducted.

e) Other standard methods of drawing/proportions for features like nuts, heads of bolts, screws etc. employed by examinees, may also be accepted.

VALUE POINTS

Distribution of Marks

1. PAN HEAD RIVET **7**

A. Front view with its axis perpendicular to H.P. *4*
B. Top view. *2*
C. Standard dimensions. *1*

NOTE: One *mark should be deducted, if it is drawn with instruments, instead of being sketched freehand.*

2. TURN BUCKLE (Assembly)

(i) FRONT VIEW LOWER HALF IN SECTION: **14**

A. Drawing the outline of the body in the lower half (4) with hatching lines (2). *6*
B. Drawing the upper half of the body. *4*
C. Drawing both rods inserting 60 mm in the body with their conventional ends. *4*

(ii) TOP VIEW: **8**

A. Drawing of the body (4) with helping figure to find the thickness of the connecting strip (1). *5*
B. Drawing both the rods with hidden lines and with their conventional ends. *3*

DETAILS : **6**

A. Print the title. *1*
B. Scale used. *1*
C. Projection symbol. *1*
D. Six important dimensions. *3*

[OR]

OPEN BEARING (Disassembly)

(i) **BODY**

(a) FULL SECTIONAL FRONT VIEW : **8**

A. Drawing the outline of the body with fillets and rounds. *3*
B. 3 mm deep recess at the bottom of the body. *1*
C. Two holes of 20 mm at CRS 124mm. *2*
D. Hatching lines. *2*

(b) TOP VIEW: **7**

A. Outline of the body ($1^1/_2$) with six vertical lines ($1^1/_2$). *3*
B. Hidden lines showing the recess of the base plate. *$1^1/_2$*
C. Two holes of Ø12 x 20 mm with centre lines *2*
D. Cutting plane. *$^1/_2$*

(ii) **BUSH**

(a) FRONT VIEW LEFT HALF IN SECTION : **4**

A. Drawing the Left Half of the bush (2) with hatching lines (1). *3*
B. Drawing the Right half of the bush. *1*

(b) TOP VIEW : **3**

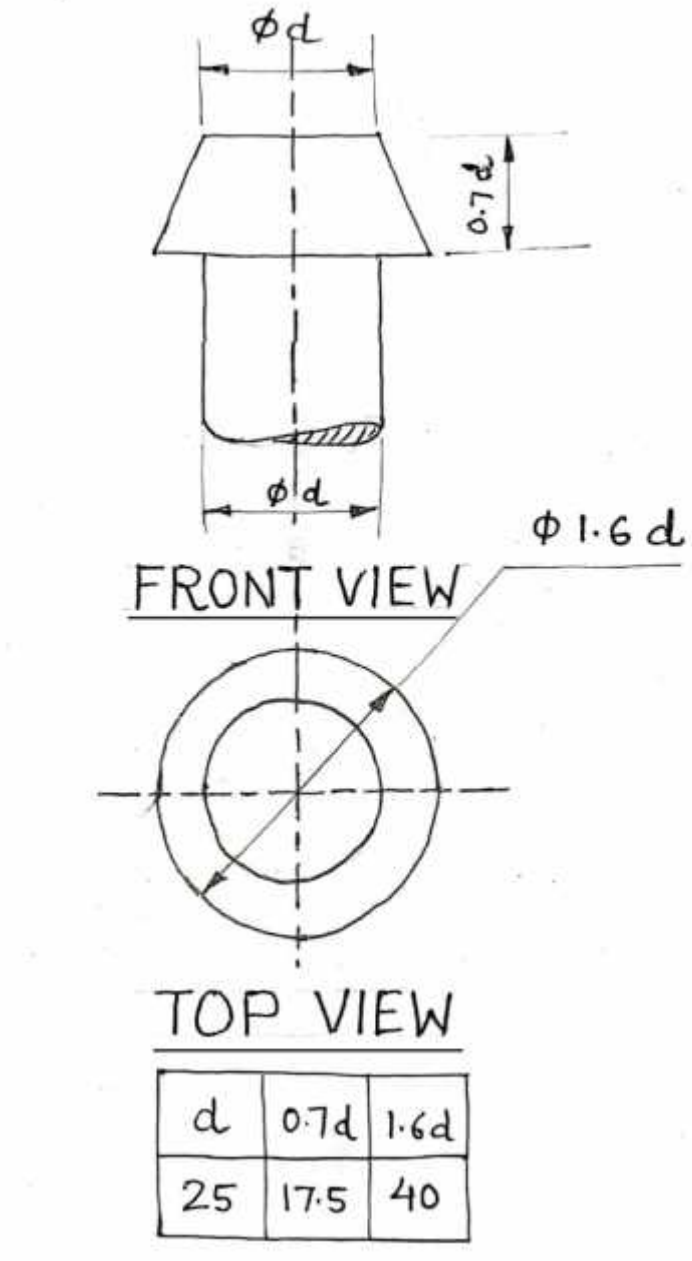
A. Drawing the outline of the bush, with two vertical lines (2) and hidden lines (½). *2½*
B. Cutting Plane. *½*

DETAILS : **6**

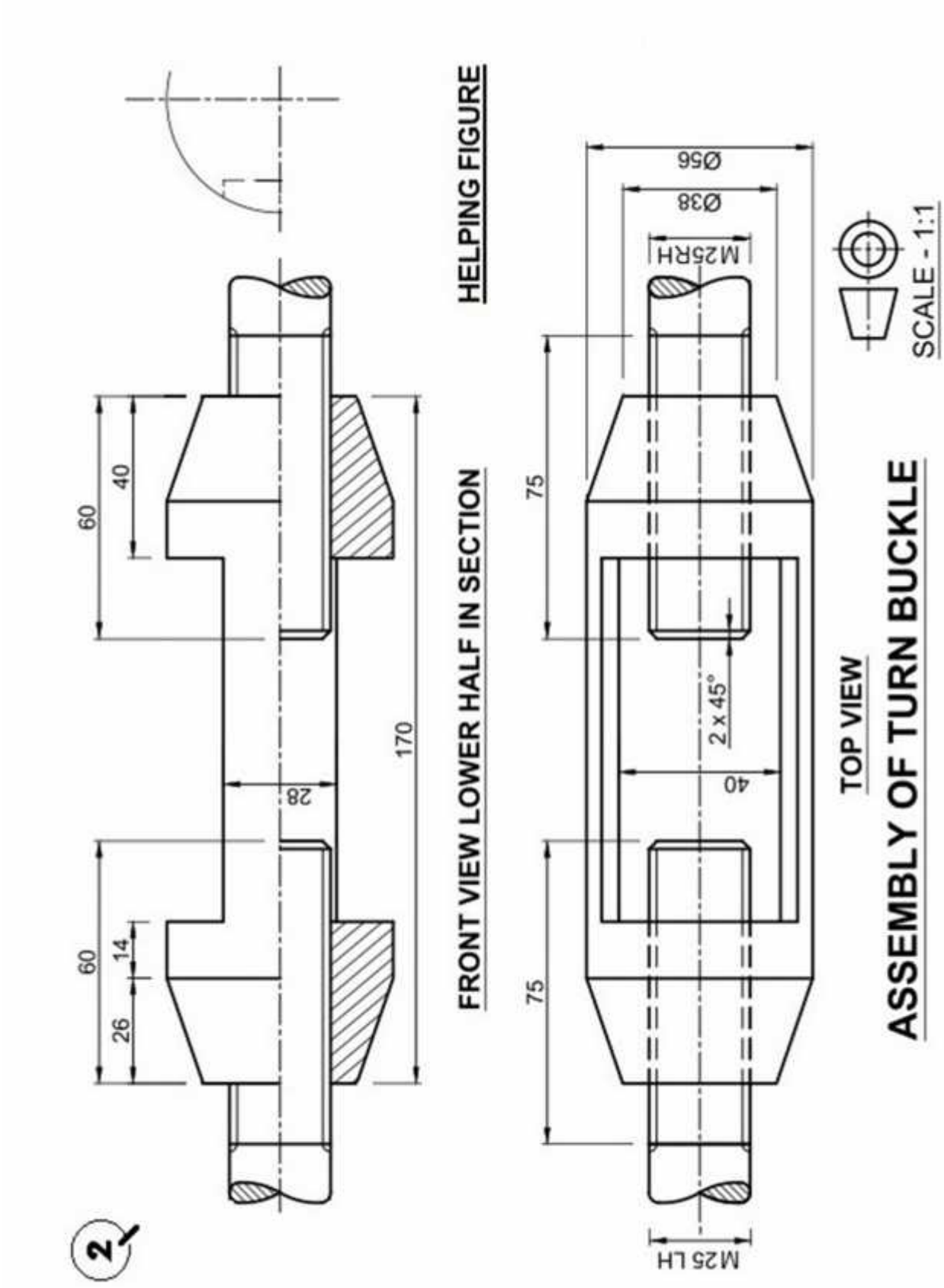
A. Print the titles. *1*
B. Scale used. *1*
C. Projection symbol. *1*
D. Six important dimensions. *3*

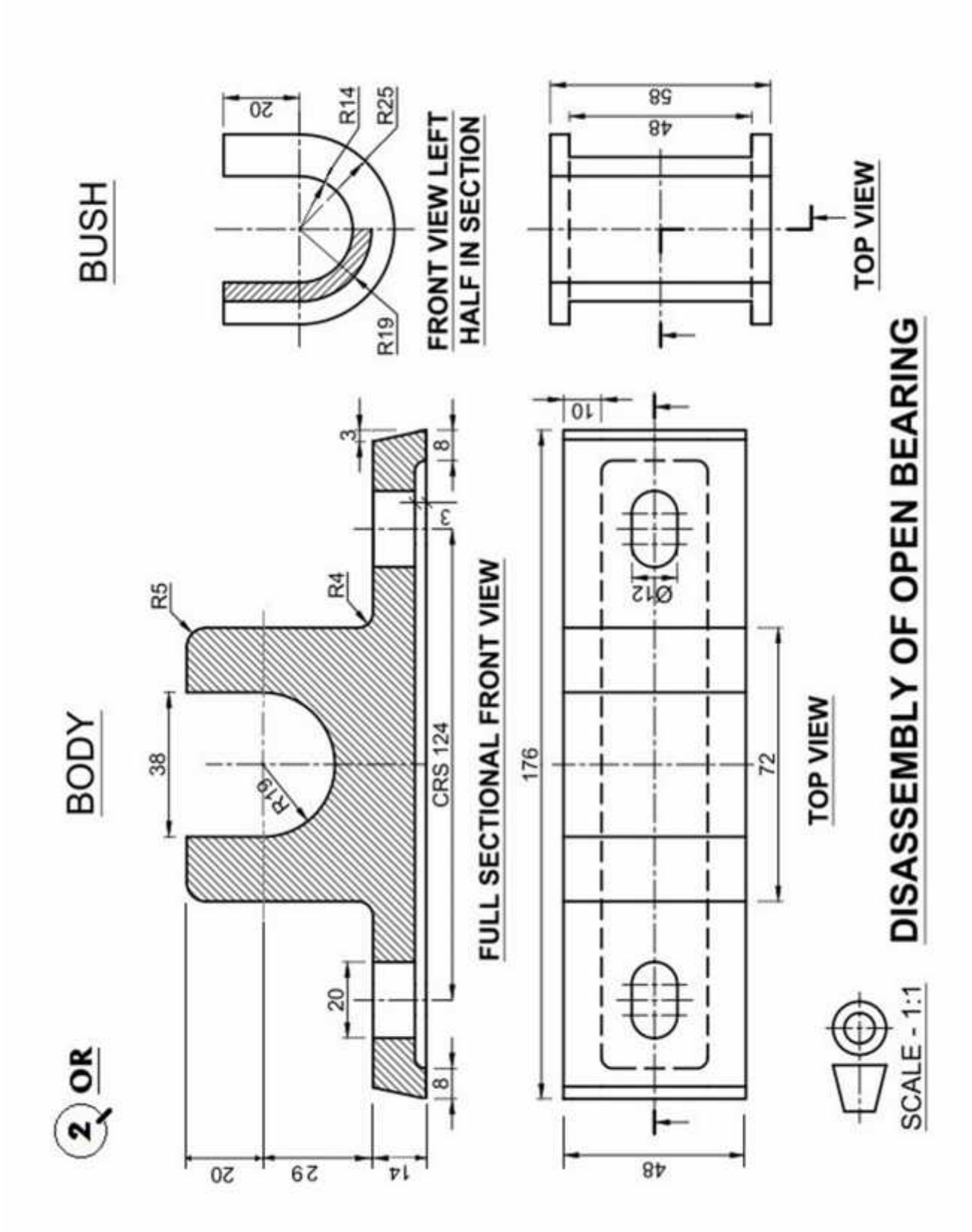
NOTE: *Examinees are not to be penalised for drawing the wrongly printed horizontal line of length 28 mm shown in front view of FIG. 2.*

Q1 PAN HEAD RIVET



d	0.7d	1.6d
25	17.5	40


HELPING FIGURE
FRONT VIEW LOWER HALF IN SECTION
TOP VIEW
ASSEMBLY OF TURN BUCKLE
SCALE - 1:1
Ø56
Ø38
M25RH
M25 LH
75
75
2 x 45°
40
60
40
60
14
26
28
170
2


2 OR
BODY
BUSH
FULL SECTIONAL FRONT VIEW
FRONT VIEW LEFT
HALF IN SECTION
TOP VIEW
TOP VIEW
DISASSEMBLY OF OPEN BEARING
SCALE - 1:1
R5
R4
R19
38
CRS 124
20
29
14
3
8
8
20
R14
R25
R19
58
48
10
176
72
48
Ø12