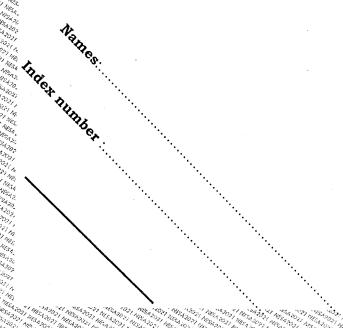


MPT – Technical and assembly Details Drawing T122

Thursday, 29/7/2021 08:30 - 11:30 AM



# TVET NATIONAL EXAMINATION, RTQF LEVEL 5, 2020-2021

## QUESTIONS and ANSWERS BOOKLET

OPTION/TRADE: MECHANICAL PRODUCTION TECHNOLOGY

SUBJECT: Technical and assembly Details Drawing

ACADEMIC YEAR: **2020-2021** 

Read carefully the instructions on page (i) & (ii).

### FOR EXAMINER'S USE ONLY

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## TVET NATIONAL EXAMINATION, RTQF LEVEL 5, 2020-2021

## **INSTRUCTIONS TO CANDIDATES: PART I (Answer Booklet)**

- 1. A candidate should fill in the actual names and the index number on the cover of this questions and answer booklet on the provided place (Black Box).
- 2. It is illegal for a candidate to write any of his/her names, index number or a school name inside the answer booklet.
- 3. A candidate should check if all pages of the answer booklet are complete. No candidate should remove or tear any pages or part of it from the answer booklet.
- 4. A candidate should answer in the language in which the examination is set. (See page (ii))
- 5. A candidate should sign on the sitting plan when submitting the answer booklet. He/she has also to check if the answer booklet is well sealed.
- 6. No extra paper is allowed in the examinations room. If a candidate is caught with it his/her results will be nullified.
- 7. No candidate is allowed to write answers not related to the subject being sat for, otherwise it will be considered as a cheating case.
- 8. Write your answers on the 12 lined pages (From page 1 of 12 to page 12 of 12).
- 9. Use the last non-lined pages as draft.
- 10. Results for any candidate who is caught in examination malpractices are nullified. The cheating can be recognized during examinations administration, marking exercise or even thereafter.

### TVET NATIONAL EXAMINATION, RTQF LEVEL 5, 2020-2021

OPTION/TRADE: MECHANICAL PRODUCTION TECHNOLOGY

SUBJECT: Technical and assembly Details Drawing

**DURATION: 3 hours** 

### INSTRUCTIONS TO CANDIDATES: PART II (Question Paper)

The paper is composed of two (2) Sections as follows:

Section I: Attempt all the Twelve (12) questions (60 marks)

Section II: Attempt any Four (4) questions out of Six (6) (40 marks)

#### Allowed materials:

- Ruler or square
- Calculator

#### Note:

Every candidate is required to carefully comply with the provided assessment instructions.

(60 marks)

**01.** List four (4) types of assembly drawings.

(5 marks)

**02.** Name any five (5) types of drawing instruments.

(5 marks)

O3. Draw the conventional symbols of first angle projection and third angle projection.(5 marks)

**04.** a) Mention any two (2) functions of drawing instruments.

**b)** Indicate three (3) types of fits.

(5 marks)

**05.** Provide an example of : a) Unilateral tolerance dimension

b) Bi-lateral tolerance dimension.

(5 marks)

**06.** a) What do you understand by Scale?

- **b)** List and explain the three (3) types of scale:
  - i. Reducing scale
  - ii. Full scale
  - iii. Enlarging scale.

(5 marks)

**07.** Define the following terms:

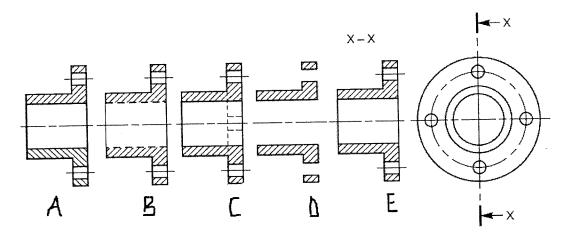
- a) a clearance fit
- **b)** An interference fit
- c) a transition fit
- d) the shaft basis
- e) Hole basis.

(5 marks)

**08.** List the elements to be considered while obtaining a projection.

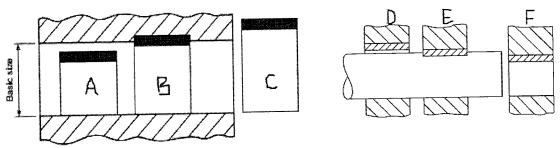
(5 marks)

**09.** Mention the drawing section which is correct in the following images: **(5 marks)** 



- 10. State any five (5) lines used in technical drawing and their usages. (5 marks)
- 11. Name the following types of fits:

## (5 marks)

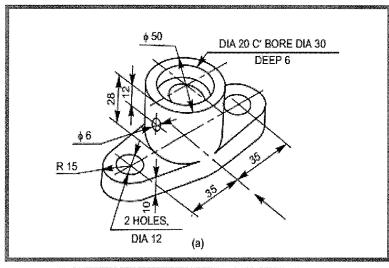


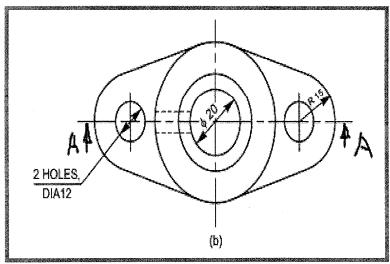
12. Draw a regular pentagon of 60 mm diameter and show the procedures to be followed. (5 marks)

- 13. a) Give the meaning of each element of the following dimension: Ø 30H7/g6
  - b) Referring to the tolerance, a part is specified in millimeters as  $10\pm0.02$ , give the range in which the acceptable part will fall.

(10 marks)

- 14. What is the general information in detail drawing? (10 marks)
- 15. Differentiate first angle projection from third angle projection. (10 marks)
- 16. Differentiate hole basis from shaft basis system. (10 marks)
- **17**. Draw the view in direction A-A in the following sectioned isometric object: (10 marks)





18. A cube of 45 mm side rests with a face on HP such that one of its vertical faces is inclined at 30° to VP. A section plane, parallel to VP cuts the cube at a distance of 15 mm from the vertical edge nearer to the observer. Draw its top and sectional front view. (10 marks)

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