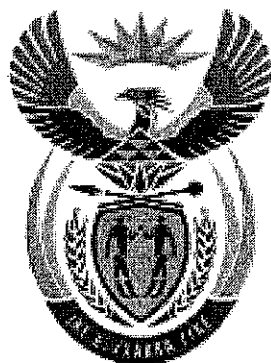


201508T073



# higher education & training

Department:  
Higher Education and Training  
**REPUBLIC OF SOUTH AFRICA**

**T370(E)(J29)T  
AUGUST EXAMINATION**

**NATIONAL CERTIFICATE: MULTI-DISCIPLINARY DRAWING  
OFFICE PRACTICE**

**COMPUTER-AIDED DRAUGHTING**

**(6010035)**

**29 July 2015 (Y-Paper)  
13:00–16:00**

**CLOSED-BOOK EXAMINATION**

**REQUIREMENTS:** A4 drawing paper  
Cover folder BOE 8/15

**This question paper consists of 7 pages, 1 reference sheet and 1 answer sheet.**

**DEPARTMENT OF HIGHER EDUCATION AND TRAINING**  
**REPUBLIC OF SOUTH AFRICA**  
**NATIONAL CERTIFICATE: MULTI-DISCIPLINARY DRAWING OFFICE**  
**PRACTICE**  
**COMPUTER-AIDED DRAUGHTING**  
**TIME: 3 HOURS**  
**MARKS: 100**

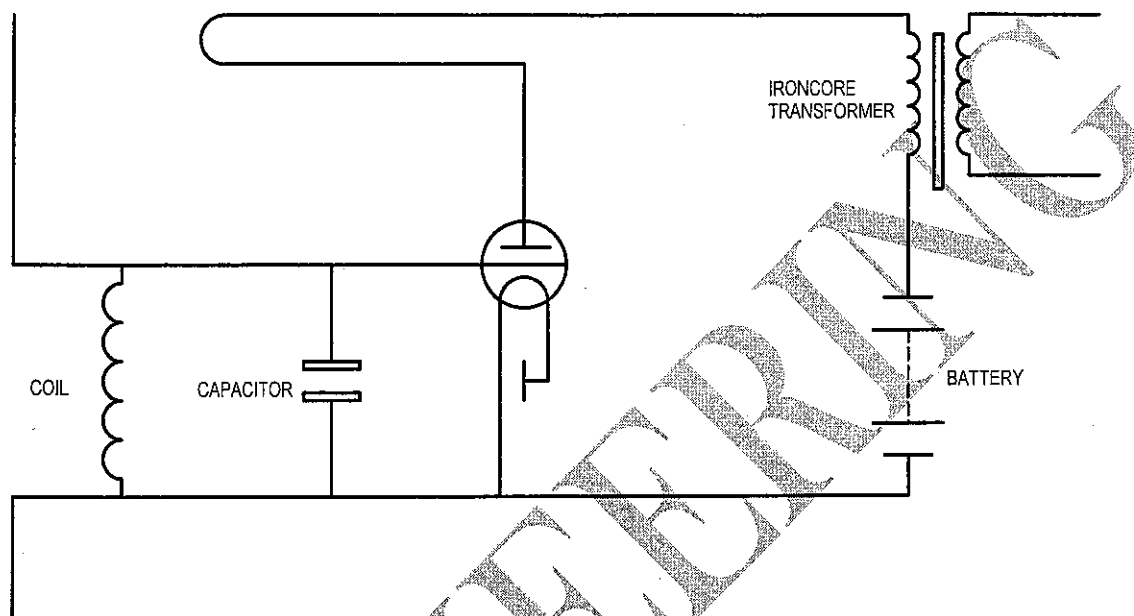
---

**INSTRUCTIONS AND INFORMATION**

1. Answer ALL the questions.
  2. Answer only QUESTION 1 on the attached ANSWER SHEET.
  3. ALL the other questions must be answered on A4 drawing sheets. Do NOT use A-3 drawing sheets.
  4. Use only ONE side of the drawing sheet to plot or print the answers.
  5. Each drawing must be plotted or printed on a separate DRAWING SHEET.
  6. The QUESTION NUMBER must appear at the top LEFT-HAND corner of EACH sheet.
  7. ALL candidate information must be plotted in the title block.
  8. Provide each drawing sheet with a border line.
  9. ALL drawings must be drawn to the given scale.
  10. Use your own discretion where dimensions are not given.
  11. Candidates must plot or print their own drawings.
  12. A balanced layout must be maintained. Candidates must plan well in order to earn marks.
  13. Insert ALL the loose DRAWING SHEETS AND ANSWER SHEET in the cover folder BOE8/15. DO NOT staple them.
  14. Write neatly and legibly.
-

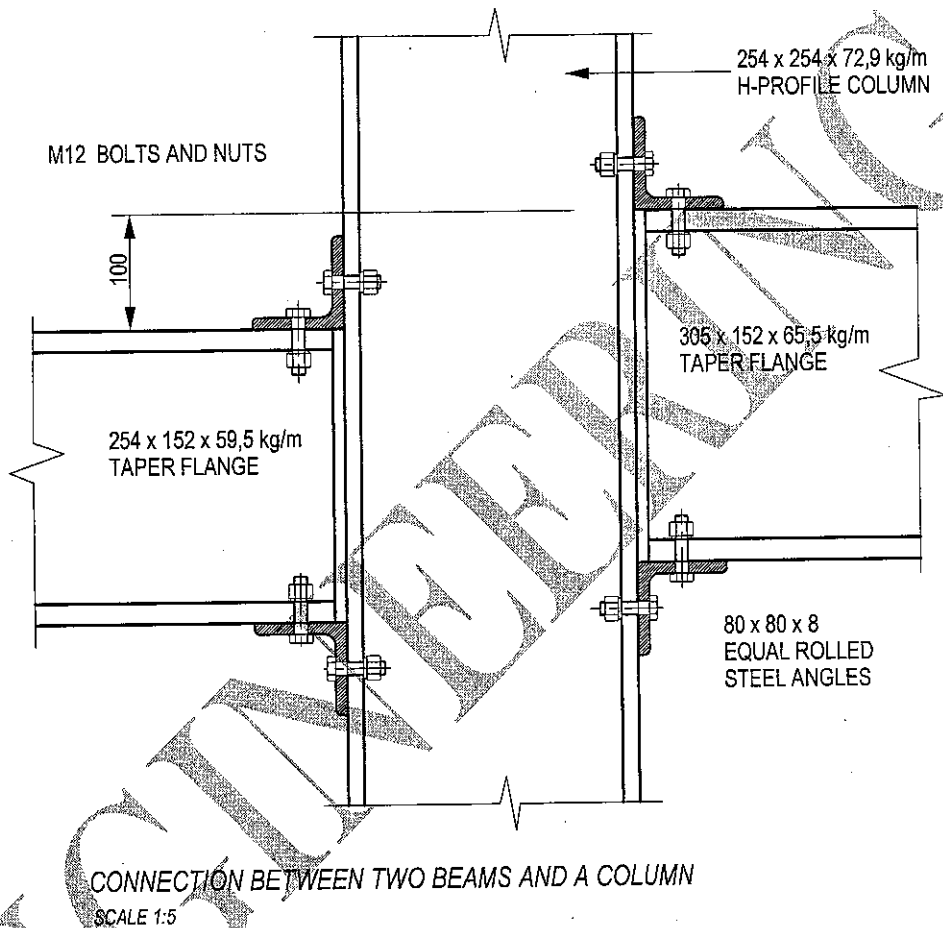
**QUESTION 2: ELECTRICAL DRAUGHTING**

FIGURE 1 show a typical electrical circuit diagram consisting of a coil, capacitor, battery and an iron-core transformer. Use A4-drawing paper, landscape orientated, and draw a large neat and well balanced layout of the given diagram. All the labels must be included.

**FIGURE 1****[15]**


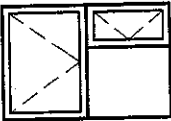
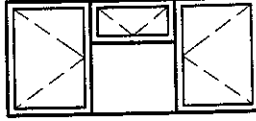

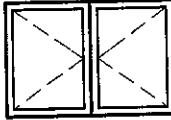
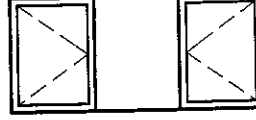

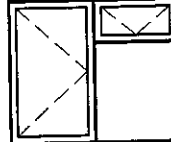
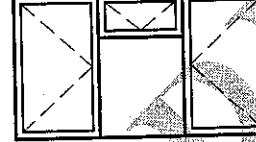
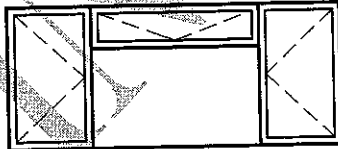

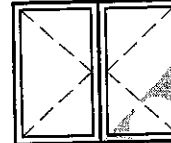
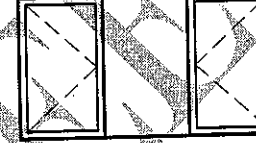
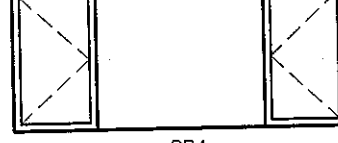

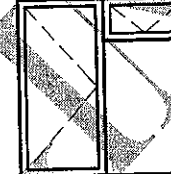
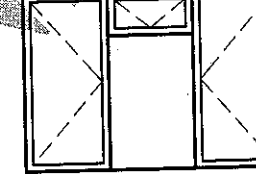
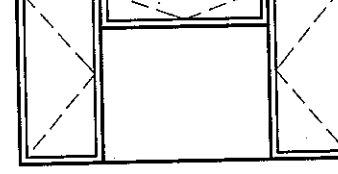

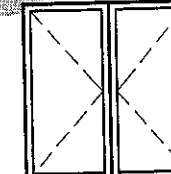
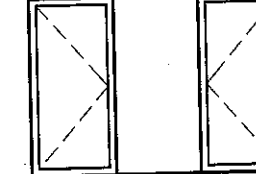
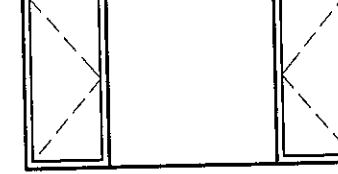

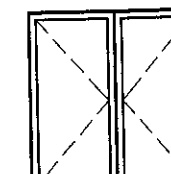
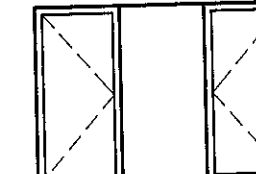
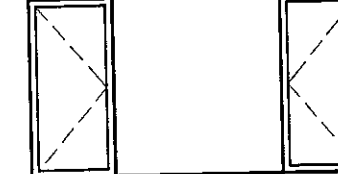
**QUESTION 4: STRUCTURAL STEEL DETAILING**

FIGURE 3 shows a structural steel connection where TWO steel beams are connected, by means of rolled steel angles, to the flanges of a steel column. Draw to scale 1 : 5 the given front view of the connection. The completed view must include all the dimensions and labels, hatching lines and positions of the bolts and nuts. Print the completed drawing on A-4, portrait orientated paper.

**FIGURE 3****[18]**

## REFERENCE SHEET

## Timber window schedule

900	<div>545</div>  <div>SC1F (0,335)</div>	<div>1045</div>  <div>SC2F (0,638)</div>	<div>1545</div>  <div>SC3F (0,941)</div>	
900	 <div>SC1 (0,303)</div>	 <div>SC22 (0,606)</div>	 <div>SC3 (1,003)</div>	
1200	 <div>SB1F (0,481)</div>	 <div>SB2F (0,906)</div>	 <div>SB3F (1,330)</div>	<div>2045</div>  <div>SB4F (1,848)</div>
1200	 <div>SB1 (0,424)</div>	 <div>SB22 (0,849)</div>	 <div>SB3 (1,393)</div>	 <div>SB4 (1,955)</div>
1500	 <div>SA1F (0,820)</div>	 <div>SA2F (1,163)</div>	 <div>SA3F (1,707)</div>	 <div>SA4F (2,381)</div>
1500	 <div>SA1 (0,544)</div>	 <div>SA22 (1,088)</div>	 <div>SA3 (1,769)</div>	 <div>SA4 (2,494)</div>
1800	 <div>SA61 (0,678)</div>	 <div>SA622 (1,356)</div>	 <div>SA63 (2,180)</div>	 <div>SA64 (3,037)</div>

(Figures in brackets indicate glass area)

ANSWER SHEET EXAMINATION NUMBER:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Candidates may use a pencil or pen.

## QUESTION 1

1.1 1.1.1

---

---

1.1.2

---

---

1.1.3

---

---

(3 x 2)

(6)

1.2

---

---

(2)

1.3

---

---

(1)

1.4 1.4.1

---

---

1.4.2

---

---

1.4.3

---

---

(3 x 2)

(6)

[15]