

Information and communication Technology -2017

Marking scheme – Grade 10

Paper I

1	1	11	3	21	2	31	2
2	4	12	2	22	4	32	3
3	3	13	2	23	2	33	1
4	1	14	1	24	1	34	4
5	2	15	4	25	3	35	3
6	3	16	1	26	3	36	3
7	2	17	1	27	3	37	4
8	2	18	1	28	4	38	2
9	3	19	2	29	2	39	2
10	1	20	2	30	4	40	1

Paper II

1.

(i)

- (a) USB Flash Drive
- (b) Modem
- (c) Multimedia Projector
- (d) Keyboard
- (e) Printer

Two correct – 0.5 marks
Three correct – 1 mark
Four correct – 1.5 marks
All correct – 2 marks

(ii) cab

2 marks or no marks

(iii)

- (a) In the classroom / LMS /ability to learn at any place, any time / teaching learning process/ (or any correct answer)

(b) Diagnosis – CAT, MRI / Telemedicine - Home health medicine, emergency telemedicine.... / (or any correct answer)

(c) (any correct answer)

(d) (any correct answer)

0.5 marks each a correct answer

Total - 2 marks

(iv)

(a)

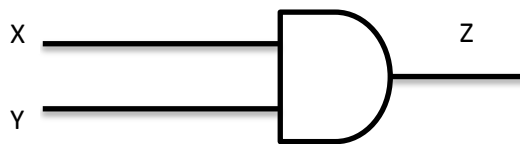
X	Y	Z
0	0	0
0	1	0
1	0	0
1	1	1

0.5
0.5

0.5 marks circuit

1 mark for truth table

(b)



1 mark for logic circuit

Total – 2marks

(v) A.

B.

C.

D.

0.5 X 4 = 2 marks

(vi) Simplex – listening to radio, watching TV (any correct answer)

Half – duplex – Willki Talkie used by security force, browsing internet to download information..... (any correct answer)

0.5 X 2 = 1 mark

Simplex - data transmission from the sender to receiver only / one direction

Half duplex - data transmission to one direction at a time.

To explain the difference 1 mark

(vii) Do not need to install application software / lower software cost / few maintenance issues / do not need to allocate space to install s/w in the hard disk/ provide saving facilities/ any where any time access / higher reliability(any correct answers)

1 x 2 = 2 marks

(viii)

R	G	B
135	31	120
10000111	11111	1111000
1000 / 0111	1 / 1111	111 / 1000
8 / 7	1 / F	7 / 8

Convert to hexadecimal

1 mark , Answer = 871F78

1 mark (Total 2 marks)

- (ix) (a) Sigiriya (b) JPEG / JPG
 (c) C:\User\Win7-L\Desktop\second term 2017
 (d) 3.51 MB

0.5 X 4 = 2 marks

- (x) No of lines / font size / correct use of grammar and language / use of colour / animation and videos/ pay attention on target group / inserting images, drawing, tables or graphs

0.5 X 4 = 2 marks

2.

(i)

Decimal	Binary	Octal	Hexadecimal
302	100101110 ₂	456 ₈	12E ₁₆
1500	10111011100 ₂	2734 ₈	5DC ₁₆

0.5 X 6 = 3 marks

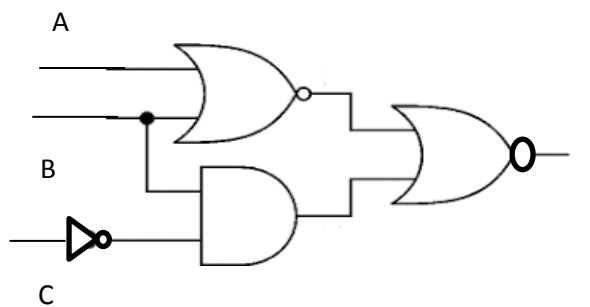
(ii)

C	o	d	e	d
67	111	100	101	100
1000011 ₂	1101111 ₂	1100100 ₂	1100101 ₂	1100100 ₂

**Correct value assigns - 1.5 marks for all, correct value assigns - 1 mark for 3 or 4
 Correct value assigns - 0.5 marks for <= 2**

**Convert to binary - 1.5 marks for all, convert to binary - 1 mark for 3 or 4
 Convert to binary - 1 mark for <= 2 (Total - 3 marks)**

(iii)



$$\overline{\overline{(A + B) + (B \cdot \bar{C})}}$$

1.5 marks circuit

2.5 marks for truth table

A	B	C	\bar{C}	A+B	$\overline{A+B}$	$B.\bar{C}$	$\overline{(A+B) + (B.\bar{C})}$
0	0	0	1	0	1	0	0
0	0	1	0	0	1	0	0
0	1	0	1	1	0	1	0
0	1	1	0	1	0	0	1
1	0	0	1	1	0	0	1
1	0	1	0	1	0	0	1
1	1	0	1	1	0	1	0
1	1	1	0	1	0	0	1

0.5
1
1

3. (i)

- | | |
|------------------|-----------------|
| 1. P - 26 | 6. U - 25 |
| 2. Q - 24 | 7. V - 18 |
| 3. R - 9, 15, 16 | 8. W - 22 |
| 4. S - 27 | 9. X - 1, 2, 21 |
| 5. T - 23 | 10. Y - 12 |

1 mark for 3 & 4 only
0.5 marks for other correct answers
Total - 6 marks

(ii) Insert \longrightarrow Symbol **0.5 marks**

(iii) mail merge **0.5 marks**

(iv) a. b. c. d. e. f. **0.5 x 6 = 3 marks**

4. (i)

- (a) Magnetic media – Hard Disk / Floppy Disk/ Magnetic Tape
- Optical Media - CD/ DVD/Blu – Ray
- Solid State – USB flash drive / Memory card

Media – correct answers , 0.5 x 3 = 1.5 marks

Example - correct answers , 0.5 x 3 = 1.5 marks

(Total – 3 marks)

(b) Virus / hacking /or any correct answer
Explain

0.5 x 2 = 1 mark
1 x 2 = 2 marks (Total – 3 marks)

(c) Password, firewall, or any correct answer

0.5 x 2 = 1 mark

(ii)) a. b. c. d. e. f. **0.5 x 6 = 3 marks**

5.

(i) = sum (B3 : B6) or
= B3+ B4+ B5+ B6 or

2 marks

(ii) = (B5 / B\$7) X 100

2 marks

(iii) = (B6 / B\$7) X 100

2 marks

(iv) Column Chart , Bar Chart

2 marks

(v) A2 : B6

2 marks

6.

(i) Food Item Table – Item_ID, Buyer Table – B_ID **0.5 x 2 = 1 mark**

(ii) (a) Food Item Table

0.5 marks

(b) Item_ID Item Stock
F005 Samosa 100

1 mark

(iii) Purchase Table - Item_ID, B_ID

1 mark

(iv) (a) Food Item Table, Buyer Table, Purchase Table

1.5 mark

(b)

Food Item Table

Item_ID	Item	Stock
F002	Patties	125
F003	Rolls	75

2 marks

Buyer Table

B_ID	Name	Phone
B05	Jayamini	43226789

1 mark

Purchase Table

Date	Item_ID	B_ID	Count
2017/03/02	F002	B05	75
2017/03/02	F003	B05	175

2 marks

Total Marks = 10

7.

(i) CAT, MRI, ECG, Cardiac Screening Machine, EEG, Blood sugar testing machine,
Blood Pressure Machine
With Special feature **2 marks**

(ii) Use of ICT to examine and provide healthcare to a patient who is far away from the hospital

Remote connecting the patient with hospital's specialist unit or specialist doctors.

1marks

Emergency Telemedicine, Home health medicine, Telemedicine Consultation, Tele surgery (Remote Surgery), Medical Tele training **1.5 marks**

Ambulance , ICU facility, Remote Clinic, Hospital Specialist center, remote clinic treatment

(any correct answers)

(iii)

- The overall cost of telecommunication system is high (data management apparatus and practical training of medical professionals)
- Virtual clinical treatment decreases human interaction - that increases the risk of error in clinical services
- Confidential medical information can be leaked through faulty electronic system.
- Difficulties in connecting virtual communication due to low internet speed
- Low quality of health informatics records, like, X-ray or other images, clinical progress reports, etc. run the risk of faulty clinical treatment.
- Telemedicine system requires tough legal regulation to prevent unauthorized and illegal service providers in this sector.

1.5 marks

(iv) Management restructuring, regulatory compliance, return on investment, consider how to control power consumption, proper disposal e waste (reduce usage, reuse, recycle),.....(any correct answer) **4 marks**