

0478 and 0984(9-1)
COMPUTER SCIENCE
TOPIC MARK SCHEMES SET-5
SMART EXAM RESOURCES
 Unit 1.1 Number Systems

MARKS SCHEME

Unit 1.1 Number Systems

ANSWER 1

| | |
|--|----------|
| | 6 |
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ANSWER 2(a)

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|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----------|
| One mark for each correct Hexadecimal value | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">C4</td> <td style="padding: 2px 10px;">10</td> <td style="padding: 2px 10px;">FE</td> <td style="padding: 2px 10px;">09</td> </tr> </table> | C4 | 10 | FE | 09 | 3 |
| C4 | 10 | FE | 09 | | | |

ANSWER 2(b)

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|---------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Any two from: Easier / simpler to remember / write down // quicker to transcribe Less likely to make error Less digits to use | 2 |
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ANSWER 3

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| 1 mark for each correct answer, in the given order: <ul style="list-style-type: none"> - analogue - digital - denary - 10 - binary - 2 | 6 |
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ANSWER 4

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| 1 mark for each correct conversion: <ul style="list-style-type: none"> - 42 - 257 - 542 | 3 |
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ANSWER 5(a)

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---|---|---|---|---|---|---|--|
| 1 mark for each correct register | 3 | | | | | | | | |
| Hours <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td></tr> </table> | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | | |
| Minutes <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr> </table> | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | |
| 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | | |
| Seconds <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>0</td><td>1</td><td>0</td></tr> </table> | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | |
| 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | | |

Unit 1.1 Number Systems

ANSWER 5(b)

| | | | | | | | | | | | | | | | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---|---------|---|---------|---|---|---|-------|--|--|---------|--|---------|--|--|--|
| 1 mark for each correct section: | 3 | | | | | | | | | | | | | | | | |
| <table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="padding: 5px 10px;">0</td> <td style="padding: 5px 10px;">5</td> <td style="padding: 5px 10px;">:</td> <td style="padding: 5px 10px;">2</td> <td style="padding: 5px 10px;">6</td> <td style="padding: 5px 10px;">:</td> <td style="padding: 5px 10px;">5</td> <td style="padding: 5px 10px;">5</td> </tr> <tr> <td colspan="3" style="text-align: center; font-size: small;">Hours</td> <td colspan="2" style="text-align: center; font-size: small;">Minutes</td> <td colspan="3" style="text-align: center; font-size: small;">Seconds</td> </tr> </table> | 0 | 5 | : | 2 | 6 | : | 5 | 5 | Hours | | | Minutes | | Seconds | | | |
| 0 | 5 | : | 2 | 6 | : | 5 | 5 | | | | | | | | | | |
| Hours | | | Minutes | | Seconds | | | | | | | | | | | | |

ANSWER 6

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---|---|------------|---|---|---|------------|---|---|---|---|------------|--|--|--|------------|--|--|--|------------|--|--|--|--|
| 1 mark for each correct section: | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="padding: 5px 10px;">1</td> <td style="padding: 5px 10px;">1</td> <td style="padding: 5px 10px;">0</td> <td style="padding: 5px 10px;">1</td> <td style="padding: 5px 10px;">0</td> <td style="padding: 5px 10px;">0</td> <td style="padding: 5px 10px;">0</td> <td style="padding: 5px 10px;">0</td> <td style="padding: 5px 10px;">0</td> <td style="padding: 5px 10px;">0</td> <td style="padding: 5px 10px;">1</td> <td style="padding: 5px 10px;">1</td> </tr> <tr> <td colspan="4" style="text-align: center; font-size: small;">← 1 mark →</td> <td colspan="4" style="text-align: center; font-size: small;">← 1 mark →</td> <td colspan="4" style="text-align: center; font-size: small;">← 1 mark →</td> </tr> </table> | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | ← 1 mark → | | | | ← 1 mark → | | | | ← 1 mark → | | | | |
| 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | | | | | | | | | | | | | | |
| ← 1 mark → | | | | ← 1 mark → | | | | ← 1 mark → | | | | | | | | | | | | | | | | | |