

PDS Mid-Semester Examination, Autumn 2019
Model Solutions

| Question | Solution |
|------------|---|
| 1(a) | #include <stdio.h> %f & (int) [4 marks; 1 mark each] [No marks if parentheses not given] |
| 1(b)-(i) | Expr=1 [2 marks] |
| 1(b)-(ii) | x=--10 y=0 [2 marks; 1 mark for each] |
| 1(b)-(iii) | x=21, i=1, j=21 [2 marks; no marks if any is incorrect] |
| 1(b)-(iv) | Red Blue Green [2 marks; no marks if any string is missing] |
| 2(a) | 5 6 7 [2 marks; no marks if any is incorrect] |
| 2(b) | (i) Switch does not have a return type. Remove 'int' before switch. (ii) case 2: case 22: Syntax error. Logical operator cannot be used with case. [2 marks; 1 for each error] |
| 2(c) | 8 5 2 [5 marks; no marks if any is incorrect/missing] |
| 2(d) | 11 [3 marks] |
| 3(a) | 14 [2 marks] 35 [2 marks] |
| 3(b) | p < a + n OR p != a + n OR p <= a+n-1 OR p < &a[n] OR p != &a[n] OR p <= &a[n-1] OR n-- [2 marks] *p>0 && *p%2==0 [2 marks] *p>0 && *p%2==1 OR *p>0 && *p%2!=0 OR *p>0 [2 marks] (*p) [1 mark] p++ OR ++p OR p+=1 OR p=p+1 [1 mark] |
| 4(a) | 13 [2 marks] |
| 4(b) | 10011 [2 marks] |
| 4(c) | x * y [2 marks] |
| 4(d) | sum right sum + arr[left] left+1 n-1 0 [6 marks; 1 mark each] |
| 5(a) | [^\\n] OR [ABCDEFGHIJKLMNOPQRSTUVWXYZ] [2 marks] strlen(message) [1 mark] message[i]+k [2 marks] message[i]-26 OR message[i]+'A'-'Z'-1 OR 'A'+message[i]%'Z' [2 marks] |
| 5(b) | count = 0 [1 mark] X[j] > X[i] OR X[i] < X[j] [2 marks] Y[i] = count [2 marks] |