10

Which ordered pairs need to be added to the relation

$p = \{(a,a),(a,d),(b,b),(b,d),(c,c),(d,a),(d,b)\}$

on the set X = {a,b,c,d} to create the equivalence relation p* generated by p?

- A (a,a)
- B (a,b)
- C (a,c)
- D (a,d)
- E (b,a)
- F (b,b)
- G (b,c)
- H (b,d)
- I (c,a)
- J (c,b)
- K (c,c)
- L (c,d)
- M (d,a)
- N (d,b)
- O (d,c)
- P (d,d)
- [x] Q None of them

Response was: Q

✗ ***Incorrect*** (0 mark)

11

Which ordered pairs need to be added to the empty relation

p = {}

on the set X = {a,b,c,d} to create the reflexive closure p^r of p?

- [ ] **A** (a,a)
- [ ] **B** (a,b)
- [ ] **C** (a,c)
- [ ] **D** (a,d)
- [ ] **E** (b,a)
- [ ] **F** (b,b)
- [ ] **G** (b,c)
- [ ] **H** (b,d)
- [ ] **I** (c,a)
- [ ] **J** (c,b)
- [ ] **K** (c,c)
- [ ] **L** (c,d)
- [ ] **M** (d,a)
- [ ] **N** (d,b)
- [ ] **O** (d,c)
- [ ] **P** (d,d)
- [x] **Q** None of them

Response was: Q

✗ ***Incorrect*** (0 mark)

12

Which ordered pairs need to be added to the relation

p = {(a,a),(a,d),(b,b),(b,c),(c,a),(d,d)}

on the set X = {a,b,c,d} to create the transitive closure p^t of p?

- [ ] **A** (a,a)
- [ ] **B** (a,b)
- [ ] **C** (a,c)
- [ ] **D** (a,d)
- [ ] **E** (b,a)
- [ ] **F** (b,b)
- [ ] **G** (b,c)
- [ ] **H** (b,d)
- [ ] **I** (c,a)
- [ ] **J** (c,b)
- [ ] **K** (c,c)
- [ ] **L** (c,d)
- [ ] **M** (d,a)
- [ ] **N** (d,b)
- [ ] **O** (d,c)
- [ ] **P** (d,d)
- [x] **Q** None of them

Response was: Q

✗ ***Incorrect*** (0 mark)

Question 4 (1 mark) Attempt 1

13

A partition pi of X = {a,b,c,d} is given by

pi = {{a,b,d},{c}}.

Which ordered pairs are in the equivalence relation p induced by the partition?

- A (a,a)
- B (a,b)
- C (a,c)
- D (a,d)
- E (b,a)
- F (b,b)
- G (b,c)
- H (b,d)
- I (c,a)
- J (c,b)
- K (c,c)
- L (c,d)
- M (d,a)
- N (d,b)
- O (d,c)
- P (d,d)
- Q None of them

Response was: Q

✗ ***Incorrect*** (0 mark)

14

A partition pi of X = {a,b,c,d} is given by

pi = {{a,b,c,d}}.

Which ordered pairs are in the equivalence relation p induced by the partition?

- [ ] **A** (a,a)
- [ ] **B** (a,b)
- [ ] **C** (a,c)
- [ ] **D** (a,d)
- [ ] **E** (b,a)
- [ ] **F** (b,b)
- [ ] **G** (b,c)
- [ ] **H** (b,d)
- [ ] **I** (c,a)
- [ ] **J** (c,b)
- [ ] **K** (c,c)
- [ ] **L** (c,d)
- [ ] **M** (d,a)
- [ ] **N** (d,b)
- [ ] **O** (d,c)
- [ ] **P** (d,d)
- [x] **Q** None of them

Response was: Q

✗ ***Incorrect*** (0 mark)

15

A partition pi of X = {a,b,c,d} is given by

pi = {{a,b},{c,d}}.

Which ordered pairs are in the equivalence relation p induced by the partition?

- [ ] **A** (a,a)
- [ ] **B** (a,b)
- [ ] **C** (a,c)
- [ ] **D** (a,d)
- [ ] **E** (b,a)
- [ ] **F** (b,b)
- [ ] **G** (b,c)
- [ ] **H** (b,d)
- [ ] **I** (c,a)
- [ ] **J** (c,b)
- [ ] **K** (c,c)
- [ ] **L** (c,d)
- [ ] **M** (d,a)
- [ ] **N** (d,b)
- [ ] **O** (d,c)
- [ ] **P** (d,d)
- [x] **Q** None of them

Response was: Q

✗ ***Incorrect*** (0 mark)

16

A partition pi of X = {a,b,c,d} is given by

pi = {{a,c,d},{b}}.

Which ordered pairs are in the equivalence relation p induced by the partition?

- [ ] **A** (a,a)
- [ ] **B** (a,b)
- [ ] **C** (a,c)
- [ ] **D** (a,d)
- [ ] **E** (b,a)
- [ ] **F** (b,b)
- [ ] **G** (b,c)
- [ ] **H** (b,d)
- [ ] **I** (c,a)
- [ ] **J** (c,b)
- [ ] **K** (c,c)
- [ ] **L** (c,d)
- [ ] **M** (d,a)
- [ ] **N** (d,b)
- [ ] **O** (d,c)
- [ ] **P** (d,d)
- [x] **Q** None of them

Response was: Q

✗ ***Incorrect*** (0 mark)

17

A partition pi of X = {a,b,c,d} is given by

pi = {{a},{b},{c},{d}}.

Which ordered pairs are in the equivalence relation p induced by the partition?

- [ ] **A** (a,a)
- [ ] **B** (a,b)
- [ ] **C** (a,c)
- [ ] **D** (a,d)
- [ ] **E** (b,a)
- [ ] **F** (b,b)
- [ ] **G** (b,c)
- [ ] **H** (b,d)
- [ ] **I** (c,a)
- [ ] **J** (c,b)
- [ ] **K** (c,c)
- [ ] **L** (c,d)
- [ ] **M** (d,a)
- [ ] **N** (d,b)
- [ ] **O** (d,c)
- [ ] **P** (d,d)
- [x] **Q** None of them

Response was: Q

✗ ***Incorrect*** (0 mark)

18

A partition pi of X = {a,b,c,d} is given by

pi = {{a,b},{c},{d}}.

Which ordered pairs are in the equivalence relation p induced by the partition?

- [ ] **A** (a,a)
- [ ] **B** (a,b)
- [ ] **C** (a,c)
- [ ] **D** (a,d)
- [ ] **E** (b,a)
- [ ] **F** (b,b)
- [ ] **G** (b,c)
- [ ] **H** (b,d)
- [ ] **I** (c,a)
- [ ] **J** (c,b)
- [ ] **K** (c,c)
- [ ] **L** (c,d)
- [ ] **M** (d,a)
- [ ] **N** (d,b)
- [ ] **O** (d,c)
- [ ] **P** (d,d)
- [x] **Q** None of them

Response was: Q

✗ ***Incorrect*** (0 mark)

19

A partition pi of X = {a,b,c,d} is given by

pi = {{a,d},{b,c}}.

Which ordered pairs are in the equivalence relation p induced by the partition?

- [ ] **A** (a,a)
- [ ] **B** (a,b)
- [ ] **C** (a,c)
- [ ] **D** (a,d)
- [ ] **E** (b,a)
- [ ] **F** (b,b)
- [ ] **G** (b,c)
- [ ] **H** (b,d)
- [ ] **I** (c,a)
- [ ] **J** (c,b)
- [ ] **K** (c,c)
- [ ] **L** (c,d)
- [ ] **M** (d,a)
- [ ] **N** (d,b)
- [ ] **O** (d,c)
- [ ] **P** (d,d)
- [x] **Q** None of them

esponse was: Q

20

A partition pi of X = {a,b,c,d} is given by

pi = {{a},{b,d},{c}}.

Which ordered pairs are in the equivalence relation p induced by the partition?

- [ ] **A** (a,a)
- [ ] **B** (a,b)
- [ ] **C** (a,c)
- [ ] **D** (a,d)
- [ ] **E** (b,a)
- [ ] **F** (b,b)
- [ ] **G** (b,c)
- [ ] **H** (b,d)
- [ ] **I** (c,a)
- [ ] **J** (c,b)
- [ ] **K** (c,c)
- [ ] **L** (c,d)
- [ ] **M** (d,a)
- [ ] **N** (d,b)
- [ ] **O** (d,c)
- [ ] **P** (d,d)
- [x] **Q** None of them

Response was: Q

✗ ***Incorrect*** (0 mark)