## © eExam Question Bank

## Coursecode:

Choose Coursecode v



| $\square$ | FBQ | Every finite integral domain is a | field |  |  |  |  | eExam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\square$ | FBQ | Let $R$ be a ring with identity, then $R$ is a field if and only if $R$ and $\square$ are the only ideals of $R$. | \{0\} |  |  |  |  | eExam |
| $\square$ | FBQ | The characteristic of a field is either a prime number or $\square$ | 0 | zero |  |  |  | eExam |
| $\square$ | FBQ | Find the value of $8+9 \mathrm{mod}$ 12 $\square$ | 5 |  |  |  |  | eExam |
| $\square$ | FBQ | How many symmetrical arrangement can we get from an equilateral triangle $\square$ | 4 |  |  |  |  | eExam |
| $\square$ | FBQ | Given a set $Y=\{y$ : multiples of 3 between 13 and 37 \} what is the cardinality of set Y $\square$ | 8 |  |  |  |  | eExam |
| $\square$ | FBQ | How many equivalence classes can be formed from the set of integer modulo 5 $\square$ | 5 |  |  |  |  | eExam |
| $\square$ | MCQ | The coset of the subgroup $\mathrm{H}=\{0,3\}$ of $\$ \$ \mathrm{Z} \_\{6\} \$ \$$ are | $\begin{aligned} & \{0,3\},\{1,4\}, \\ & \{2,4\} \end{aligned}$ | $\begin{aligned} & \{0,2\},\{1,3\}, \\ & \{2,5\} \end{aligned}$ | $\{1,3\},\{2,4\},\{2,5\}$ | $\{0,3\},\{1,4\},\{2,5\}$ | D | eExam |
| $\square$ | MCQ | Which of the following rings are not integral domain $\begin{aligned} & \text { \$\$Z_\{6\}\$\$, \$\$ Z_\{13\}, } \\ & \text { \$\$Z_\{16\}\$\$, \$\$ Z_\{19\}\$\$? } \end{aligned}$ | $\begin{aligned} & \left.\$ \$ Z \_13\right\} \$ \$ \\ & \$ \$ Z\{19\} \$ \$ \end{aligned}$ | $\begin{aligned} & \left.\$ \$ Z \_13\right\} \$ \$ \\ & \$ \$ Z \_\{16\} \$ \$ \end{aligned}$ | $\begin{aligned} & \$ \$ Z \_\{6\} \$ \$, \\ & \$ \$ Z \_\{16\} \$ \$ \end{aligned}$ | \$\$Z_\{6\}\$\$, \$\$Z_\{19\}\$\$ | C | eExam |
| $\square$ | MCQ | The multiplication table for the $U(12)$ is ? <image=U.png> | (a) | (b) | ( c ) | (d) | A | eExam |
| $\square$ | MCQ | Which of the following is/are true about multiplication tables (a) and (b) defined on the set G= \{a,b,c,d\}. <image=G.png> | (a) is a group, (b) is not a group | (a) is not a group, (b) is a group | (b) is not a group | (a) is a group | B | eExam |
| $\square$ | MCQ | Solution of all \$\$xlepsilon Z\$\$ satisfying the equation $5 x+1=13(\bmod 26)$ | $\begin{aligned} & \{\ldots,-2,10,22, \\ & \ldots\} \end{aligned}$ | $\begin{aligned} & \{\ldots,-1,12,26, \\ & \ldots\} \end{aligned}$ | $\{\ldots,-8,18,44, \ldots\}$ | $\{\ldots, 0,8,23, \ldots\}$ | C | eExam |
| $\square$ | MCQ | Let $R$ be the universal set and suppose that \$\$left |  |  |  |  |  |  |
| { } A=xlepsilon R:0<x\leq3 \right } \backslash \} \$  and  \$ \$ 1  left  \backslash \{ $B=x$ lepsilon R:Olleq $x<4$ Iright $\backslash\} \$ \$$, find $A$ union B | \$\$Veft <br>  <br> xlepsilon <br> R : $1<\mathrm{x}<3$ <br> \|right 1$\} \$ \$$ | \$\$Veft <br>  <br> xlepsilon <br> R:2<x<4 <br> \|right l\}\$\$ | \$\$Vleft <br> x xepsilon <br> R: $0<x<3$ lright 1$\} \$ \$$ | \$\$lleft $\backslash\{$ xlepsilon $\mathrm{R}: 0<$ $\mathrm{x}<4$ \right } \backslash \} \$ | D | eExam |  |  |


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| $\square$ | MCQ | If $\mathrm{C}, \mathrm{N}, \mathrm{R}, \mathrm{Z}$, and Q represent the set of complex, natural, real, integers and rational numbers respectively then which of the following arrangement is true | \$\$Nlsubset <br> Zlsubset <br> Qlsubset <br> RIsubset C <br> \$\$ | \$\$Clsubset <br> ZIsubset <br> Qlsubset <br> Rlsubset N \$\$ | \$\$NIsubset Qlsubset <br> R\|subset ZIsubset C \$\$ | \$\$NIsubset CIsubset <br> Qlsubset RIsubset Z \$\$ | A | EExam |
| $\square$ | MCQ | Four relations a to $d$ are defined on sets $A$ and $B$ as in the diagram shown. Which of the relations represent a function from $A$ to $B$ ? | f 1 and f2 | , f1 and g1 | f2 and g1 | f2 and g2 | A | eExam |
| $\square$ | MCQ | For sets $A$ and $B$, if $A$ and $B$ are subset of $Z$ (the set of Integer) which of the following relations between the two subset is true? | $(\mathrm{AuB})=\mathrm{A}$ | $(\mathrm{A} \backslash \mathrm{~B}) \mathrm{n}(\mathrm{~B} \backslash \mathrm{~A})=$ <br> empty set | $(A \backslash B) n(B \backslash A)=Z$ | , (A\B)u(B\A)= empty set | B | eExam |
| $\square$ | MCQ | Find the order of element -1 in the multiplicative group \$\$leftl\{1,-1,-i, (-i) \rightl\}\$\$ | 0 | 3 | 1 | 2 | D | eExam |
| $\square$ | MCQ | Which are the possible orders of the subgroup H of a group $G$ of order 8 ? | 1,2,4,8 | 1,3,5,8 | 2, 3, 6, 8 | 0,2,6,8 | A | eExam |
| $\square$ | MCQ | Which of the following is divisible by 17 for all positive integer n | \$\$7^\{n\}+2\$\$ | \$\$6^\{n\}+2\$\$ | \$\$2.7^\{n\}+3.5^\{n\}-5\$\$ | \$\$3.5^\{2n+1\}+2^\{3n+1\}\$\$ | D | eExam |
| $\square$ | MCQ | A matrix \$\$ <br> X=\bigl(\begin\{smallmatrix\} } <br>  <br> 2lend\{smallmatrix\}\|bigr)\$\$ <br> define a function from <br> \$\$\mathbb $\{R\}^{\wedge}\{2\}$; <br> tol; Imathbb\{R\}^\{2\} \$\$ by <br> \$\$f_\{X\}(a,b)=(3a+b,l; <br> $5 a+2 b) \$ \$$. find the inverse <br> function of \$\$f_\{X\}\$\$ | $\begin{aligned} & \$ \$ f^{\wedge}\{-1\} \_\{X\} \\ & (a, b)=(3 a- \\ & b, 1 ; \\ & -5 a+3 b) \$ \$ \end{aligned}$ | $\begin{aligned} & \$ \$ f \wedge\{5\} \_\{X\} \\ & (a, b)=(2 a- \\ & b, l ; \\ & -5 a+3 b) \$ \$ \end{aligned}$ | $\begin{aligned} & \$ \$ f^{\wedge}\{1\} \_\{X\}(a, b)=(2 a- \\ & b, \backslash ;-5 a+3 b) \$ \$ \end{aligned}$ | $\begin{aligned} & \$ \$ f^{\wedge}\{1\} \_\{X\}(a, b)=(2 a-b, l \\ & -5 a+4 b) \$ \$ \end{aligned}$ | C | eExam |
| $\square$ | MCQ | Given a set \$\$X=\left |  |  |  |  |  |  |
| { } $a, b, c$ right $\backslash\} \$ \$$, and a function $\$ \$ 1 P s i: X 1$; \rightarrow $\backslash ; \times \$ \$$ define by $\$ \$$ Pssi(a)=b,l; \Psi (b)=a, $\ ;$ 1 Psi (c)=c $\$ \$$. the function is | bijective | only injective | Only onto | no solution | A | eExam |  |  |
| $\square$ | MCQ | If G is a cyclic group of order 4 generated by a, and let $\$ \$ H=<a^{\wedge}\{2\}>\$ \$$ | \$\$Veft\|\{e, <br> $\mathrm{e}^{\wedge} 2 \mid$ right $\left.\mid\right\}$ \; <br> and $\backslash$; left \} <br> \{a, a^3 <br> \|rightl\}\$\$ | \$\$Veft |  |  |  |  |
| {a, } $a^{\wedge} 2$ 2rightl\} \; and \; \left \} \{a, a^3 \right } 13\$\$ | \$\$1eft\|\{e, $a^{\wedge} 2$ \|right $\}$ \; and \; lleft |  |  |  |  |  |  |  |
| {a, a^3 } \|rightl|\$\$\$ | \$\$left <br> e, a^3\|rightl\} \; <br> and \; left <br> {e, a^2 right } 13\$\$ | C | eExam |  |  |  |  |  |
| $\square$ | MCQ | If H is a group and x and y belongs to H such that $x y=y x$, given that the order of $x$ is $m$, the order of $y$ is $n$, and $(m, n)=1$, what is the order of $x y$ ? | mn | $3 n+4 n$ | $m+n$ | \$\$mn^\{e\}\$\$ | A | eExam |
| $\square$ | MCQ | What is the generator of $(Z$, + ) cyclic group? | \$\$linfty\$\$ | 2 | 0 | 1 | D | eExam |



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