

Ans 01

$$(1) \pi_{SNO} (\sigma_{JMO = J_1(SPJ)})$$

$$(2) \pi_{SNO} (\sigma_{PNO = P_1 (\sigma_{JMO = J_1(SPJ)})})$$

$$(3) \pi_{SNO} (\sigma_{COLOR = \text{BZ} (\sigma_{JMO = J_1(SPJ)} \bowtie P)})$$

$$(4) \pi_{JMO} (\sigma_{COLOR = \text{BZ} ((P \bowtie SPJ) \bowtie S)}) - \sigma_{COLOR = \text{BZ} \wedge \text{ATTITUDE} = \text{BZ}} ((P \bowtie SPJ) \bowtie S)$$

$$(5) \pi_{PNO, JMO(SPJ)} \div \pi_{PNO} (\sigma_{SNO = S_1(SPJ)})$$