### 22.2.2 The Receive operation

***Restrictions***

In addition to the general static rules of TTCN‑3 given in clause 5, the following restrictions apply:

a) When defining the message in-line, the optional type part shall be present whenever the type of the message being received is ambiguous.

b) The **receive** operation shall only be used on message-based ports and the type of the value to be received shall be included in the list of incoming types of the port type definition.

c) No binding of the incoming values to the terms of the expression or to the template shall occur.

d) A message received by *receive any message* shall not be stored, i.e. the **value** clause shall not be present.

e) Type mismatch at storing the received value or parts of the received value and storing the sender shall cause an error.

f) *AddressRef* for retrieving the sending entity shall be of type **address**, **component** or of the type provided in the address declaration of the port type of the port instance referenced in the **receive** operation.

g) The *PortArrayRef* shall be a reference to a port array variable identifier.

h) The index redirection shall only be used when the operation is used on an any from port array construct.

i) If the index redirection is used for single-dimensional port arrays, the type of the integer variable shall allow storing the highest index of the respective array.

j) If the index redirection is used for multi-dimensional port arrays, the size of the integer array or record of integer type shall exactly be the same as the dimension of the respective array, and its type shall allow storing the highest index (from all dimensions) of the array.

k) If a variable referenced in the **value**, **sender** or **@index** clause is a lazy or fuzzy variable, the expression assigned to this variable is equal to the result produced by the **receive** operation i.e. later evaluation of the lazy or fuzzy variable does not lead to repeated invocation of the **receive** operation.

l) If the **receive** operation contains both **from** and **sender** clause, the variable or parameter referenced in the **sender** clause shall be type compatible with the template in the **from** clause.

### 22.2.3 The Trigger operation

***Restrictions***

In addition to the general static rules of TTCN‑3 given in clause 5, the following restrictions apply:

a) The **trigger** operation shall only be used on message-based ports and the type of the value to be received shall be included in the list of incoming types of the port type definition.

b) A message received by *TriggerOnAnyMessage* shall not be assigned to a variable.

c) Type mismatch at storing the received value or parts of the received value and storing the sender shall cause an error.

d) *AddressRef* for retrieving the sending entity shall be of type **address**, **component** or of the type provided in the address declaration of the port type of the port instance referenced in the **trigger** operation.

e) The *PortArrayRef* shall be a reference to a port array variable identifier.

f) The index redirection shall only be used when the operation is used on an any from port array construct.

g) If the index redirection is used for single-dimensional port arrays, the type of the integer variable shall allow storing the highest index of the respective array.

h) If the index redirection is used for multi-dimensional port arrays, the size of the integer array or record of integer type shall exactly be the same as the dimension of the respective array, and its type shall allow storing the highest index (from all dimensions) of the array.

i) If a variable referenced in the **value**, **sender** or **@index** clause is a lazy or fuzzy variable, the expression assigned to this variable is equal to the result produced by the **trigger** operation, i.e. later evaluation of the lazy or fuzzy variable does not lead to repeated invocation of the **trigger** operation.

j) If the **trigger** operation contains both **from** and **sender** clause, the variable or parameter referenced in the **sender** clause shall be type compatible with the template in the **from** clause.

### 22.3.2 The Getcall operation

***Restrictions***

In addition to the general static rules of TTCN‑3 given in clause 5, the following restrictions apply:

a) The **getcall** operation shall only be used on procedure-based ports and the signature of the procedure call to be accepted shall be included in the list of allowed incoming procedures of the port type definition.

b) The signature argument of the **getcall** operation shall not be used to pass in variable names for **in** and **inout** parameters.

c) The *ParameterIdentifier*s shall be from the corresponding signature definition.

d) The value assignment part shall not be used with the getcall operation.

e) Parameters of calls accepted by *accepting any call* shall not be assigned to a variable, i.e. the **param** clause shall not be present.

f) *AddressRef* for retrieving the sending entity shall be of type **address**, **component** or of the type provided in the address declaration of the port type of the port instance referenced in the **getcall** operation.

g) The *PortArrayRef* shall be a reference to a port array variable identifier.

h) The index redirection shall only be used when the operation is used on an any from port array construct.

i) If the index redirection is used for single-dimensional port arrays, the type of the integer variable shall allow storing the highest index of the respective array.

j) If the index redirection is used for multi-dimensional port arrays, the size of the integer array or record of integer type shall exactly be the same as the dimension of the respective array, and its type shall allow storing the highest index (from all dimensions) of the array.

k) If a variable referenced in the **param**, **sender** or **@index** clause is a lazy or fuzzy variable, the expression assigned to this variable is equal to the result produced by the **getcall** operation, i.e. later evaluation of the lazy or fuzzy variable does not lead to repeated invocation of the **getcall** operation.

l) If the **getcall** operation contains both **from** and **sender** clause, the variable or parameter referenced in the **sender** clause shall be type compatible with the template in the **from** clause.

### 22.3.4 The Getreply operation

***Restrictions***

In addition to the general static rules of TTCN‑3 given in clause 5, the following restrictions apply:

a) A **getreply** operation shall only be used at a procedure-based port. The type definition of the port shall include the name of the procedure to which the **getreply** operation belongs.

b) The signature argument of the **getreply** operation shall not be used to pass in variable names for **out** and **inout** parameters.

c) Parameters or return values of responses accepted by *get any reply* shall not be assigned to a variable, i.e. the **param** and **value** clause shall not be present.

d) *AddressRef* for retrieving the sending entity shall be of type **address**, **component** or of the type provided in the address declaration of the port type of the port instance referenced in the **getreply** operation.

e) The *PortArrayRef* shall be a reference to a port array variable identifier.

f) The index redirection shall only be used when the operation is used on an any from port array construct.

g) If the index redirection is used for single-dimensional arrays, the type of the integer variable shall allow storing the highest index of the respective port array.

h) If the index redirection is used for multi-dimensional arrays, the size of the integer array or record of integer type shall exactly be the same as the dimension of the respective port array, and the its type shall allow storing the highest index (from all dimensions) of the port array.

i) If a variable referenced in the **value**, **param**, **sender** or **@index** clause is a lazy or fuzzy variable, the expression assigned to this variable is equal to the result produced by the **getreply** operation, i.e. later evaluation of the lazy or fuzzy variable does not lead to repeated invocation of the **getreply** operation.

j) If the **getreply** operation contains both **from** and **sender** clause, the variable or parameter referenced in the **sender** clause shall be type compatible with the template in the **from** clause.

### 22.3.6 The Catch operation

***Restrictions***

In addition to the general static rules of TTCN‑3 given in clause 5, the following restrictions apply:

1. The **catch** operation shall only be used at procedure-based ports. The type of the caught exception shall be specified in the signature of the procedure that raised the exception.
2. No binding of the incoming values to the terms of the expression or to the template shall occur. The assignment of the exception values to variables shall be made in the assignment part of the **catch** operation.
3. Catching **timeout** exceptions shall be restricted to the exception handling part of a call. No further matching criteria (including a **from** part) and no assignment part is allowed for a **catch** operation that handles a **timeout** exception.
4. Exception values accepted by *catch any exception* shall not be assigned to a variable, i.e. the **value** clause shall not be present.
5. If *CatchAnyException* is used in the response and exception handling part of a **call** operation, it shall only treat exceptions raised by the procedure invoked by the **call** operation.
6. *AddressRef* for retrieving the sending entity shall be of type **address**, **component** or of the type provided in the address declaration of the port type of the port instance referenced in the **catch** operation.
7. The *PortArrayRef* shall be a reference to a port array variable identifier.
8. The index redirection shall only be used when the operation is used on an any from port array construct.
9. If the index redirection is used for single-dimensional arrays, the type of the integer variable shall allow storing the highest index of the respective port array.
10. If the index redirection is used for multi-dimensional arrays, the size of the integer array or record of integer type shall exactly be the same as the dimension of the respective port array, and the its type shall allow storing the highest index (from all dimensions) of the port array.
11. If a variable referenced in the **value**, **sender** or **@index** clause is a lazy or fuzzy variable, the expression assigned to this variable is equal to the result produced by the **catch** operation, i.e. later evaluation of the lazy or fuzzy variable does not lead to repeated invocation of the **catch** operation.
12. If the **catch** operation contains both **from** and **sender** clause, the variable or parameter referenced in the **sender** clause shall be type compatible with the template in the **from** clause.

## 22.4 The Check operation

***Restrictions***

In addition to the general static rules of TTCN‑3 given in clause 5, the following restrictions apply:

1. Using the **check** operation in a wrong manner, e.g. check for an exception at a message-based port shall cause a test case error.
2. *AddressRef* for retrieving the sending entity shall be of type **address**, **component** or of the type provided in the address declaration of the port type of the port instance referenced in the **check** operation.
3. The *PortArrayRef* shall be a reference to a port array variable identifier.
4. The index redirection shall only be used when the operation is used on an any from port array construct.
5. If the index redirection is used for single-dimensional arrays, the type of the integer variable shall allow storing the highest index of the respective port array.
6. If the index redirection is used for multi-dimensional arrays, the size of the integer array or record of integer type shall exactly be the same as the dimension of the respective port array, and the its type shall allow storing the highest index (from all dimensions) of the port array.
7. If a variable referenced in the **sender** or **@index** clause is a lazy or fuzzy variable, the expression assigned to this variable is equal to the result produced by the **check** operation, i.e. later evaluation of the lazy or fuzzy variable does not lead to repeated invocation of the **check** operation.
8. If the **check** operation contains both **from** and **sender** clause, the variable or parameter referenced in the **sender** clause shall be type compatible with the template in the **from** clause.